

MIDSIS - TROCS 4.0

Maritime Integrated Decision Support Information System
on Transport of Chemical Substances

Updated on: 23/04/2024



INTERNATIONAL
MARITIME
ORGANIZATION



Bonn Agreement
Accord de Bonn



Transport
Canada

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Canada



1,1,1-TRICHLOROETHANE

UN Number: 2831 - CAS Number: 71-55-6

Also known as: CHLOROETHANE

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number	2831
CAS number	71-55-6

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1310 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	133.41
Density of gas (kg/m ³)	5.934
Boiling Point (°C)	74
Melting Point (°C)	-38
Vapour Pressure (Pa)	13330 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	537
Upper explosivity limit (UEL) (volume %)	16

Behaviour at sea

Additional data

Colour	colourless
Odour	chemical odour

Transportation data

Package group	III
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	under pressure
IMO class	6.1

Reactivity data

Water	Yes
Acid(s)	No
Base(s)	No
Metal(s) and alloys	No
Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	2 - ≥ 2 and < 3
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	SD - Sinker/Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

IDHL	1000
TLV-TWA	350
ERPG-1 (ppm)	350
ERPG-2 (ppm)	700
ERPG-3 (ppm)	3500

Ecotoxicity

1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE

CAS Number: 76-13-1

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 76-13-1

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1400 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	187.37
Density of gas (kg/m ³)	8.34
Boiling Point (°C)	48
Melting Point (°C)	-35
Vapour Pressure (Pa)	36000 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	680

Behaviour at sea

Additional data

Colour	colourless
Odour	sweet, ether-like

Transportation data

Cargo group	36
State	liquid
Temperature (°C)	ambient
Family name	halogenated hydrocarbons

Reactivity data

Water	No
Base(s)	Yes
Metal(s) and alloys	Yes (powder)
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	3 - ≥ 3 and < 4
Bioaccumulation in BCF (A1B)	2 - ≥ 10 and < 100
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly
Effects on wildlife and bottom habitats (E3)	1 - Is a floater; and/or is slightly acutely toxic; and/or is mildly irritant to skin and/or eyes

Human toxicity threshold

IDHL	2000
TLV-TWA	1000
TEEL-1 (mg/m3)	1250 ppm
TEEL-2 (mg/m3)	1500 ppm
TEEL-3 (mg/m3)	2000 ppm

Ecotoxicity

1,1,2-TRICHLOROETHANE

UN Number: 3082 - CAS Number: 70-00-5

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number	3082
CAS number	70-00-5

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1440 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	133.4
Density of gas (kg/m ³)	5.93
Boiling Point (°C)	114
Melting Point (°C)	-36
Vapour Pressure (Pa)	2500 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	410
Upper explosivity limit (UEL) (volume %)	15.5

Behaviour at sea

Additional data

Colour	colourless
Odour	characteristic

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	36
State	liquid
Family name	halogenated hydrocarbons

Reactivity data

Water	No
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Metal(s) and alloys	Yes (Al)
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	2 - ≥ 2 and < 3
Bioaccumulation in BCF (A1B)	1 - ≥ 1 and < 10
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	SD - Sinker/Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

IDHL	100
TLV-TWA	10

Ecotoxicity

1,1-DICHLOROETHANE

UN Number: 2362 - CAS Number: 75-34-3

Also known as: CHLORINATED HYDROCHLORIC ETHER

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number	2362
CAS number	75-34-3

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1174 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	98.97
Density of gas (kg/m ³)	4.41
Boiling Point (°C)	57.3
Melting Point (°C)	-97.4
Vapour Pressure (Pa)	40534 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	458
Flash Point (°C)	-5.5
Lower explosivity limit (LEL) (volume %)	5.6
Upper explosivity limit (UEL) (volume %)	11.4

Behaviour at sea

Additional data

Colour	colourless
Odour	ethereal, chloroform-like
Standard behavior classification	SD/DE

Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	36

State	liquid
Temperature (°C)	cool
Family name	halogenated hydrocarbons
IMO class	3.2

Reactivity data

Water	No
Metal(s) and alloys	Yes
Oxidizing agents	Yes
Reducing agents	No
Combustibles	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	SD - Sinker/Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

IDHL	3000
TLV-TWA	100
TEEL-1 (mg/m3)	300 ppm
TEEL-2 (mg/m3)	3000 ppm
TEEL-3 (mg/m3)	3000 ppm

Ecotoxicity

1,1-DICHLOROPROPANE

UN Number: 1993 - CAS Number: 78-99-9

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1993
CAS number	78-99-9

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1132 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	112.99
Density of gas (kg/m ³)	5.03
Boiling Point (°C)	88.1
Melting Point (°C)	-35
Vapour Pressure (Pa)	24890 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	557
Flash Point (°C)	15.56
Lower explosivity limit (LEL) (volume %)	3.4 (E)
Upper explosivity limit (UEL) (volume %)	14.5 (E)

Behaviour at sea

Additional data

Colour	colourless
Odour	sweet

Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	36
State	liquid
Temperature (°C)	ambient
Family name	halogenated hydrocarbons

IMO class	3.2
Reactivity data	
Water	No
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	2 - ≥ 2 and < 3
Bioaccumulation in BCF (A1B)	1 - ≥ 1 and < 10
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	1 - Low
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	SD - Sinker/Dissolver
Effects on wildlife and bottom habitats (E3)	1 - Is a floater; and/or is slightly acutely toxic; and/or is mildly irritant to skin and/or eyes

Human toxicity threshold

TEEL-1 (mg/m3)	12.5 ppm
TEEL-2 (mg/m3)	75 ppm
TEEL-3 (mg/m3)	400 ppm

Ecotoxicity

1,2,3-Trichlorobenzene

UN Number: 2810 - CAS Number: 87-61-6

Also known as: 1,2,6-Trichlorobenzene, Vic-Trichlorobenzene, 1,2,3-Tcb, 1,2,3-Trcb, 1,2,3-Trichlorobenzene, Trichloro-1,2,3 Benzene

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2810
CAS number	87-61-6
Formula	C ₆ H ₃ Cl ₃

Physical chemical data

Physical State (25°C)	Solid
Kinematic viscosity (cSt)	1.16 [cSt] at a temperature of 50°C
Molar mass (g/mol)	181.46
Solubility (g/L)	18 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	218.5
Melting Point (°C)	51.3
Critical temperature (°C)	762.5
Critical pressure (Pa)	3010000
Flash Point (Pensky-Martens closed cup) (°C)	113
Henry's constant (mol/(m ³ ·Pa))	126.7

Behaviour at sea

Log kow	4.05
Log koc	3.14
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Bioconcentration factor (BCF)	1300

Additional data

MARPOL pollution category

Category	Description
X	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a major hazard to either marine resources or human health and, therefore, justify the prohibition of the discharge into the marine environment.

Transportation data

Reactivity data

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	4 - ≥ 4 and < 5
Bioaccumulation in BCF (A1B)	4 - ≥ 500 and < 4000
Bioaccumulation (A1)	4 - High potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	2 - Moderate
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold



Hazard statements

Health

H317 May cause an allergic skin reaction.

Environmental

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements**Prevention**

P262	Do not get in eyes, on skin, or on clothing.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Ecotoxicity

Lowest median lethal concentration (LC50) on crustacean (mg/l)	0.08
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Lowest median lethal concentration (LC50) on fishes (mg/l)	0.348
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Highest no observed effect concentration (NOEC) on fishes (mg/l)	0.9
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1,2,3-TRICHLOROPROPANE

CAS Number: 96-18-4

Also known as: ALLYL TRICHLORIDE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 96-18-4

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1390 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	147.43
Density of gas (kg/m ³)	6.45
Boiling Point (°C)	156
Melting Point (°C)	-15
Vapour Pressure (Pa)	200 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	304
Flash Point (°C)	73
Lower explosivity limit (LEL) (volume %)	3.2
Upper explosivity limit (UEL) (volume %)	12.6

Behaviour at sea

Additional data

Colour	colourless
Odour	strong acid

Transportation data

Cargo group	36
Temperature (°C)	out of sunlight
Family name	halogenated hydrocarbons

Reactivity data

Water	No
Base(s)	Yes
Metal(s) and alloys	Yes (Al)
Oxidizing agents	Yes
Combustibles	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	2 - ≥ 2 and < 3
Bioaccumulation in BCF (A1B)	2 - ≥ 10 and < 100
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Specific Health Concern (D3)	C - Carcinogenicity
Interference with coastal amenities (E2)	SD - Sinker/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

IDHL	100
TLV-TWA	10
TEEL-1 (mg/m3)	10 ppm
TEEL-2 (mg/m3)	10 ppm
TEEL-3 (mg/m3)	100 ppm

Ecotoxicity

1,2,4-TRICHLOROBENZENE

UN Number: 2321 - CAS Number: 120-82-1

Also known as: BENZENE, 1,2,4-TRICHLORO-

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2321
CAS number	120-82-1

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1450 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	181,5
Density of gas (kg/m ³)	8.06
Boiling Point (°C)	213
Melting Point (°C)	16.5
Vapour Pressure (Pa)	130 (38°C) [Pa] at a temperature of 20°C
Ignition Temperature (°C)	571
Flash Point (°C)	99

Behaviour at sea

Additional data

Colour	white
Odour	sharp, chlorobenzene-like

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	36
Temperature (°C)	ambient
Family name	halogenated hydrocarbons
IMO class	6.1

Reactivity data

Water	No
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	4 - ≥ 4 and < 5
Bioaccumulation in BCF (A1B)	5 - ≥ 4000
Bioaccumulation (A1)	5 - Very high potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	1 - Low
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Specific Health Concern (D3)	M - Mutagenicity
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TEEL-1 (mg/m3)	5 ppm
TEEL-2 (mg/m3)	5ppm
TEEL-3 (mg/m3)	40 ppm

Ecotoxicity

1,2-BUTYLENE OXIDE stabilized

UN Number: 3022 - CAS Number: 106-88-7

Also known as: BUTANE, 1,2-EPOXY, 1-BUTENE OXIDE, BUTYLENE OXIDE

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number	3022
CAS number	106-88-7

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	826 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	72
Density of gas (kg/m ³)	3.225
Boiling Point (°C)	63
Melting Point (°C)	-150
Vapour Pressure (Pa)	19329 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	550
Flash Point (°C)	-15
Lower explosivity limit (LEL) (volume %)	1.5
Upper explosivity limit (UEL) (volume %)	25.1

Behaviour at sea

Additional data

Colour	colourless
Odour	sharp odour
Standard behavior classification	ED

Transportation data

Package group	II
Cargo group	16
State	liquid

Temperature (°C)	ambient
Pressure (Pa)	pressure - vacuum
Family name	alkylene oxides
IMO class	3.2

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Interference with coastal amenities (E2)	DE - Dissolver/Evaporator
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TEEL-1 (mg/m3)	75
TEEL-2 (mg/m3)	200
TEEL-3 (mg/m3)	200

Ecotoxicity

1,2-DICHLOROETHANE

UN Number: 1184 - CAS Number: 107-06-2

Also known as: BORER SOL, BROCID, 1,2-DCE, DESTRIXOL BORER SOL, DICHLOREMULSION, alpha,beta-DICHLORO ETHANE, DICHLORO-1,2-ETHANE, sym-DICHLOROETHANE, DICHLORURE D'ETHYLENE, DICHLORURE D'ETHYLENE, DUTCH LIQUID, DUTCH OIL, 1,2-Dichloroethane, 1,2-Ethylene Dichloride, Ethane Dichloride, Ethylene Chloride, Bichlorure D'Ethylene, Chlorure D'Ethylene, Sym-Dichloroethane, Edc, Ethylene Dichloride

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1184
CAS number	107-06-2
Formula	C ₂ H ₄ Cl ₂

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	1253 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	0.67 [cSt] at a temperature of 20°C 0.62 [cSt] at a temperature of 25°C
Molar mass (g/mol)	98.96
Density of gas (kg/m ³)	4.386
Solubility (g/L)	8690 [g/L] at a temperature of 20°C and salinity of 0‰ 8600 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	83.7
Melting Point (°C)	-36
Critical molar volume (m ³ /mol)	0.000225
Critical temperature (°C)	561
Critical pressure (Pa)	5400000
Surface tension (mN/m)	32.2 [mN/m] at a temperature of 20°C 31.86 [mN/m] at a temperature of 25°C
Interfacial tension (mN/m)	30 [mN/m] at a temperature of 25°C and salinity of 0‰
Vapour Pressure (Pa)	8700 [Pa] at a temperature of 20°C 10546 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	440

Flash Point (°C)	13
Flash Point (Pensky-Martens closed cup) (°C)	13
Flash Point (Cleveland open cup) (°C)	18
Lower explosivity limit (LEL) (volume %)	6.2
Upper explosivity limit (UEL) (volume %)	16
Vapor enthalpy (J/Kg)	323160 [J/Kg] at a temperature of 83.5°C 355295 [J/Kg] at a temperature of 25°C
Combust enthalpy (J/Kg)	11200000
Specific heat capacity (J/(Kg·K))	1297.5
Combustion efficiency (%)	50
Mass flow rate of the combustion surface (Kg/(m ² ·s))	0.04
Rad fraction (%)	40
Henry's constant (mol/(m ³ ·Pa))	111.46

Behaviour at sea

Log kow	1.48
Log koc	1.45
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Biodegradation in marine environment (Half-life) (days)	Not biodegradable
Bioconcentration factor (BCF)	2.75

Additional data

Colour	colourless
Odour	sweet odour

MARPOL pollution category	Category	Description
	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.
Standard behavior classification	SD	

Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	36
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	under pressure
Family name	halogenated hydrocarb

IMO class	3.2
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Reactivity data

Static electricity	Yes
Notable risks	On combustion, forms toxic and corrosive fumes Reacts with oxidizers.

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation in BCF (A1B)	1 - ≥ 1 and < 10
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Specific Health Concern (D3)	C - Carcinogenicity
Interference with coastal amenities (E2)	SD - Sinker/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



IDHL	1000	
Hazard statements	Physical	
	H225	Highly flammable liquid and vapour.
	Health	
	H302	Harmful if swallowed.
	H315	Causes skin irritation.
	H319	Causes serious eye irritation.
	H335	May cause respiratory irritation.
H350	May cause cancer.	

Precautionary statements	Prevention
	P201 Obtain special instructions before use.
	P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
	P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
	Response
	P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P311 Call a POISON CENTER or doctor/physician.

ERPG-1 (ppm)	50
ERPG-2 (ppm)	200
ERPG-3 (ppm)	300

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	166
Lowest median lethal concentration (LC50) on crustacean (mg/l)	85
Lowest median lethal concentration (LC50) on fishes (mg/l)	11.8
Highest no observed effect concentration (NOEC) on algae (mg/l)	53
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	10.6
Highest no observed effect concentration (NOEC) on fishes (mg/l)	14
Assessment factor (AF)	10 on the short term 10 on the long term
Predicted No Effect Concentration (PNEC) (µg/l)	1180 [µg/l] on the short term 1060 [µg/l] on the long term

1,2-DICHLOROETHYLENE

UN Number: 1150

Also known as: ACETYLENE DICHLORIDE, DICHLORO-1,2 ETHYLENE, 1,2-DICHLORO-ETHYLENE, DIOFORM

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1150

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1270 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	97
Density of gas (kg/m ³)	4.386
Boiling Point (°C)	60
Melting Point (°C)	-80
Vapour Pressure (Pa)	8000 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	460
Lower explosivity limit (LEL) (volume %)	9.7
Upper explosivity limit (UEL) (volume %)	13

Behaviour at sea

Additional data

Colour	colourless
Odour	sweet, pleasant odour

Transportation data

Package group	II
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	under pressure
IMO class	3.2

Reactivity data

Water	No
Acid(s)	No
Base(s)	No
Metal(s) and alloys	No
Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

IDHL	4000
TLV-TWA	200

Ecotoxicity

1,2-DICHLOROPROPANE

UN Number: 1279 - CAS Number: 78-87-5

Also known as: DICHLOROPROPANE, Propylene Dichloride, 1,2-Dichloropropane

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1279
CAS number	78-87-5
Formula	C ₃ H ₆ Cl ₂

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	1150 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	112.99
Density of gas (kg/m ³)	5.04
Solubility (g/L)	2.8 [g/L] at a temperature of 20°C and salinity of 0‰ 2.7 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	96
Melting Point (°C)	-100
Critical temperature (°C)	578.5
Critical pressure (Pa)	4154325
Surface tension (mN/m)	33.93 [mN/m] at a temperature of 20°C
Vapour Pressure (Pa)	5600 [Pa] at a temperature of 20°C 6666 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	555
Flash Point (°C)	15
Flash Point (Pensky-Martens closed cup) (°C)	13
Flash Point (Cleveland open cup) (°C)	21
Lower explosivity limit (LEL) (volume %)	3.4
Upper explosivity limit (UEL) (volume %)	14.5
Vapor enthalpy (J/Kg)	300235 [J/Kg] at a temperature of 96.4°C 321540 [J/Kg] at a temperature of 25°C
Combustion enthalpy (J/Kg)	17000000

Specific heat capacity (J/(Kg·K))	1320
Henry's constant (mol/(m ³ ·Pa))	274

Behaviour at sea

Log kow	2
Log koc	1.6
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	5771
Biodegradation in marine environment (Half-life) (days)	Not biodegradable
Bioconcentration factor (BCF)	1

Additional data

Colour	colourless
Odour	sweet, chloroform odour

MARPOL pollution category	Category	Description
	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.

Standard behavior classification	SD
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Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	36
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	under pressure
Family name	halogenated hydrocarbons
IMO class	3.2

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	2 - ≥ 2 and < 3
Bioaccumulation in BCF (A1B)	1 - ≥ 1 and < 10
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	SD - Sinker/Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold



IDHL	2000
Hazard statements	Physical
	H225 Highly flammable liquid and vapour.
	Health
	H302 Harmful if swallowed. H332 Harmful if inhaled.
Precautionary statements	Prevention
	P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
	P241 Use explosion-proof electrical/ventilating/lighting/.../equipment.
	P260 Do not breathe dust/fume/gas/mist/vapours/spray.
	P280 Wear protective gloves/protective clothing/eye protection/face protection.
	Response
	P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
	P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
TLV-TWA	75
TEEL-1 (mg/m3)	300 ppm
TEEL-2 (mg/m3)	400 ppm
TEEL-3 (mg/m3)	400 ppm

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	38
Lowest median lethal concentration (LC50) on crustacean (mg/l)	24.79
Lowest median lethal concentration (LC50) on fishes (mg/l)	240
Highest no observed effect concentration (NOEC) on algae (mg/l)	38
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	> 100
Highest no observed effect concentration (NOEC) on fishes (mg/l)	4.09
Assessment factor (AF)	500 on the short term
Predicted No Effect Concentration (PNEC) (µg/l)	8 [µg/l] on the short term

1,3,5-TRIMETHYL BENZENE

UN Number: 2325 - CAS Number: 526-73-8

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number	2325
CAS number	526-73-8

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	800 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	120
Density of gas (kg/m ³)	5.354
Vapour Pressure (Pa)	10100 [Pa] at a temperature of 20°C
Flash Point (°C)	44

Behaviour at sea

Additional data

Colour	green
Odour	ammonia, fish odour
Standard behavior classification	DE, D

Transportation data

Package group	III
State	liquid
IMO class	3.3

Reactivity data

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	3 - ≥ 3 and < 4
Bioaccumulation in BCF (A1B)	3 - ≥ 100 and < 500
Bioaccumulation (A1)	3 - Moderate potential to bioaccumulate

Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	2 - Irritating
Interference with coastal amenities (E2)	FE - Floater/Evaporator
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

TEEL-1 (mg/m3)	140
TEEL-2 (mg/m3)	360
TEEL-3 (mg/m3)	500

Ecotoxicity

1,3,5-TRIOXANE

CAS Number: 110-88-3

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 110-88-3

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	1200 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	90.1
Boiling Point (°C)	115 (sublim.)
Melting Point (°C)	61
Vapour Pressure (Pa)	1700 (25°C [Pa] at a temperature of 20°C
Ignition Temperature (°C)	410
Flash Point (°C)	44
Lower explosivity limit (LEL) (volume %)	3.6
Upper explosivity limit (UEL) (volume %)	29

Behaviour at sea

Additional data

Colour	white
Odour	sweet, ether-like
Standard behavior classification	SD

Transportation data

Cargo group	41
State	solid
Family name	ethers

Reactivity data

Water	No
Acid(s)	Yes

Metal(s) and alloys	Yes (mild steel)
Static electricity	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	0 - Not irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Specific Health Concern (D3)	R - Reprotoxicity
Interference with coastal amenities (E2)	SD - Sinker/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

Ecotoxicity

1,3-CYCLOPENTADIENE DIMER molten

CAS Number: 77-73-6

Also known as: BICYCLOPENTADIENE, BISCYCLOPENTADIENE, 1,3-CYCLOPENTADIENE dimère, fondu, DICYCLOPENTADIENE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 77-73-6

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	980 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	132.22
Boiling Point (°C)	172
Melting Point (°C)	33
Vapour Pressure (Pa)	180000 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	503
Flash Point (°C)	26
Lower explosivity limit (LEL) (volume %)	0.8
Upper explosivity limit (UEL) (volume %)	6.3

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless

Transportation data

Cargo group	30
State	solid
Family name	olefins

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	3 - ≥ 3 and < 4
Bioaccumulation in BCF (A1B)	3 - ≥ 100 and < 500
Bioaccumulation (A1)	3 - Moderate potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	Fp - Persistent slick forming substance
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

1,3-DICHLOROPROPANE

UN Number: 1993 - CAS Number: 142-28-9

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1993
CAS number	142-28-9

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1188 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	112.99
Density of gas (kg/m ³)	5.03
Boiling Point (°C)	120.4
Melting Point (°C)	-99.5
Vapour Pressure (Pa)	8425 [Pa] at a temperature of 20°C
Flash Point (°C)	15
Lower explosivity limit (LEL) (volume %)	3.4 (E)
Upper explosivity limit (UEL) (volume %)	14.5 (E)

Behaviour at sea

Additional data

Colour	colourless
Odour	sweet

Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	36
State	liquid
Temperature (°C)	ambient
Family name	halogenated hydrocarbons
IMO class	3.2/3.3

Reactivity data

Water	No
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	2 - ≥ 2 and < 3
Bioaccumulation in BCF (A1B)	1 - ≥ 1 and < 10
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	1 - Low
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Interference with coastal amenities (E2)	SD - Sinker/Dissolver

Human toxicity threshold

TEEL-1 (mg/m3)	15 ppm
TEEL-2 (mg/m3)	100 ppm
TEEL-3 (mg/m3)	350 ppm

Ecotoxicity

1,3-DIISOPROPYLBENZENE

UN Number: 3082 - CAS Number: 25321-09-9

Also known as: BENZENE, DIISOPROPYL, BIS(1-METHYLETHYL)-BENZENE, CUMENE BOTTOMS, DIPB

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	3082
CAS number	25321-09-9

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	856 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	162.3
Density of gas (kg/m ³)	7.22
Boiling Point (°C)	203
Melting Point (°C)	-63
Vapour Pressure (Pa)	133 (34°C) [Pa] at a temperature of 20°C
Ignition Temperature (°C)	449
Flash Point (°C)	76
Lower explosivity limit (LEL) (volume %)	0.9
Upper explosivity limit (UEL) (volume %)	6.5

Behaviour at sea

Additional data

Colour	clear amber
Odour	odourless
Standard behavior classification	F/FD

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	32

State	liquid
Temperature (°C)	ambient
Family name	aromatic hydrocarbons

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	5 - ≥ 5 and \leq ca.7
Bioaccumulation in BCF (A1B)	4 - ≥ 500 and < 4000
Bioaccumulation (A1)	4 - High potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	F - Floating substance, not likely to evaporate or to dissolve quickly
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

1,3-PENTADIENE

CAS Number: 504-60-9

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 504-60-9

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	680 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	68.12
Density of gas (kg/m ³)	3.1
Boiling Point (°C)	42
Melting Point (°C)	-87.5
Vapour Pressure (Pa)	46000 [Pa] at a temperature of 20°C
Flash Point (°C)	-29
Upper explosivity limit (UEL) (volume %)	8.3

Behaviour at sea

Additional data

Colour	colourless
Odour	faint

Transportation data

Cargo group	30
State	liquid
Family name	olefins

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	2 - ≥ 2 and < 3
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	E - Evaporator
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

1,4-BUTYNE-2-DIOL

UN Number: 2716

Also known as: BUTYNE-2 DIOL-1,4

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 2716

Physical chemical data

Physical State (20°C)	Solid
Molar mass (g/mol)	86.09
Density of gas (kg/m ³)	2.83
Melting Point (°C)	58
Vapour Pressure (Pa)	0.2 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	335
Flash Point (°C)	152

Behaviour at sea

Additional data

Colour white to light yellow

Transportation data

Package group	III
State	solid
IMO class	6.1

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

TEEL-2 (mg/m3)	20
TEEL-3 (mg/m3)	30

Ecotoxicity

1,5,9-CYCLODODECATRIENE

UN Number: 2518 - CAS Number: 4904-61-4

Also known as: CYCLODODECATRIENE, Cdt, Cyclododeca-1,5,9-Triene, 1,5,9-Cyclododecatriene

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2518
CAS number	4904-61-4
Formula	C ₁₂ H ₁₈

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	890 [Kg/m ³] at a temperature of 20°C 840 [Kg/m ³] at a temperature of 100°C
Molar mass (g/mol)	162.28
Solubility (g/L)	5 [g/L] at a temperature of 20°C and salinity of 0‰ 0.34 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	231
Melting Point (°C)	-17
Vapour Pressure (Pa)	12265 (160°C) [Pa] at a temperature of 20°C
Flash Point (°C)	80
Flash Point (Pensky-Martens closed cup) (°C)	88
Lower explosivity limit (LEL) (volume %)	1
Upper explosivity limit (UEL) (volume %)	4
Henry's constant (mol/(m ³ ·Pa))	2847.2

Behaviour at sea

Log kow	5.1
Log koc	3.73
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Bioconcentration factor (BCF)	2000

Additional data

Colour	white to slightly yellow
Odour	pungent
MARPOL pollution category	Category Description
	X Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a major hazard to either marine resources or human health and, therefore, justify the prohibition of the discharge into the marine environment.
Marine pollutant	P
Standard behavior classification	F/FE/E

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	30
State	liquid
Temperature (°C)	ambient
Family name	olefins
IMO class	6.1

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	5 - ≥ 5 and \leq ca.7
Bioaccumulation in BCF (A1B)	5 - ≥ 4000
Bioaccumulation (A1)	5 - Very high potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Specific Health Concern (D3)	A - Aspiration
Interference with coastal amenities (E2)	F - Floating substance, not likely to evaporate or to dissolve quickly

Effects on wildlife and bottom habitats (E3)

3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



Hazard statements**Health**

H304 May be fatal if swallowed and enters airways.

Environmental

H410 Very toxic to aquatic life with long lasting effects.

Ecotoxicity

Lowest median lethal concentration (LC50) on crustacean (mg/l) 0.47

Lowest median lethal concentration (LC50) on fishes (mg/l) 2.0

1-DECENE

UN Number: 3295 - CAS Number: 872-05-9

Also known as: DECENE-1, N-DECYLENE, Decene, Decylene, 1-Decene, Dec-1-Ene

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	3295
CAS number	872-05-9
Formula	C ₁₀ H ₂₀

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	741 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	0.75 [cSt] at a temperature of 20°C 1.0205 [cSt] at a temperature of 25°C
Molar mass (g/mol)	140.2
Solubility (g/L)	0.115 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	170
Melting Point (°C)	-66
Critical molar volume (m ³ /mol)	0.000584
Critical temperature (°C)	617
Critical pressure (Pa)	2220000
Surface tension (mN/m)	24 [mN/m] at a temperature of 20°C
Vapour Pressure (Pa)	150 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	210
Flash Point (°C)	46
Flash Point (Pensky-Martens closed cup) (°C)	45
Lower explosivity limit (LEL) (volume %)	0.5
Upper explosivity limit (UEL) (volume %)	5.4
Vapor enthalpy (J/Kg)	359530 [J/Kg] at a temperature of 25°C
Specific heat capacity (J/(Kg·K))	2144
Henry's constant (mol/(m ³ ·Pa))	54715

Behaviour at sea

Log kow	4.7
Log koc	1.724
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Bioconcentration factor (BCF)	488

Additional data

Colour	colourless
Odour	pleasant odour
MARPOL pollution category	Category Description
	X Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a major hazard to either marine resources or human health and, therefore, justify the prohibition of the discharge into the marine environment.
Standard behavior classification	D, FD, F

Transportation data

Cargo group	30
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	olefins

Reactivity data

Water	No
Acid(s)	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	5 - ≥ 5 and \leq ca.7
Bioaccumulation (A1)	5 - Very high potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	2 - Moderate
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	0 - Not irritating
Specific Health Concern (D3)	A - Aspiration
Interference with coastal amenities (E2)	F - Floating substance, not likely to evaporate or to dissolve quickly

Effects on wildlife and bottom habitats (E3)

3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



Hazard statements

Physical

H226 Flammable liquid and vapour.

Health

H304 May be fatal if swallowed and enters airways.

Environmental

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P243 Take precautionary measures against static discharge.

P273 Avoid release to the environment.

Response

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P331 Do NOT induce vomiting.

P391 Collect spillage.

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l) 22

Lowest median lethal concentration (LC50) on crustacean (mg/l) 480

Lowest median lethal concentration (LC50) on fishes (mg/l) > 1000

1-DODECENE

UN Number: 2850 - CAS Number: 6842-15-5

Also known as: DODECENE-1, Propylene Tetramer, Tetrapropylene, Dodecene, 1-Dodecene, Dodec-1-Ene

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2850
CAS number	6842-15-5
Formula	C ₁₂ H ₂₄

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	758 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	1.18 [cSt] at a temperature of 20°C 1.5823 [cSt] at a temperature of 25°C
Molar mass (g/mol)	168.31
Density of gas (kg/m ³)	7.495
Solubility (g/L)	0.113 [g/L] at a temperature of 20°C and salinity of 0‰ 0.203 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	213
Melting Point (°C)	-32
Critical temperature (°C)	658
Critical pressure (Pa)	1930000
Surface tension (mN/m)	25.6 [mN/m] at a temperature of 20°C
Vapour Pressure (Pa)	133 [Pa] at a temperature of 20°C 220 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	255
Flash Point (°C)	100
Flash Point (Cleveland open cup) (°C)	79
Lower explosivity limit (LEL) (volume %)	0.6
Vapor enthalpy (J/Kg)	361100 [J/Kg] at a temperature of 25°C
Specific heat capacity (J/(Kg·K))	2143

Behaviour at sea

Log kow	6.1
Log koc	5.864
Bioconcentration factor (BCF)	310

Additional data

Colour	colourless
Odour	mild pleasant odour

MARPOL pollution category	Category	Description
	X	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a major hazard to either marine resources or human health and, therefore, justify the prohibition of the discharge into the marine environment.

Transportation data

Cargo group	30
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	olefins
IMO class	3.3

Reactivity data

Water	No
Acid(s)	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	5 - ≥ 5 and \leq ca.7
Bioaccumulation in BCF (A1B)	2 - ≥ 10 and < 100
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	1 - Low
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Interference with coastal amenities (E2)	Fp - Persistent slick forming substance
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	22
Lowest median lethal concentration (LC50) on crustacean (mg/l)	480
Lowest median lethal concentration (LC50) on fishes (mg/l)	> 1000
Assessment factor (AF)	1 on the short term
Predicted No Effect Concentration (PNEC) (µg/l)	1 [µg/l] on the short term

1-HEXENE

UN Number: 2370 - CAS Number: 592-41-6

Also known as: 1-Hexene, Butylethylene, Hex-1-Ene

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2370
CAS number	592-41-6
Formula	C ₆ H ₁₂

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	673 [Kg/m ³] at a temperature of 20°C 668.5 [Kg/m ³] at a temperature of 25°C
Kinematic viscosity (cSt)	0.35 [cSt] at a temperature of 20°C 0.37696 [cSt] at a temperature of 25°C
Molar mass (g/mol)	84.16
Density of gas (kg/m ³)	3.87
Solubility (g/L)	50 [g/L] at a temperature of 20°C and salinity of 0‰ 50 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	63.7
Melting Point (°C)	-140
Critical temperature (°C)	504
Surface tension (mN/m)	17.9 [mN/m] at a temperature of 25°C
Vapour Pressure (Pa)	41320 [Pa] at a temperature of 20°C 24531 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	253
Flash Point (°C)	-18
Flash Point (Pensky-Martens closed cup) (°C)	-25
Lower explosivity limit (LEL) (volume %)	1.2
Upper explosivity limit (UEL) (volume %)	6.9
Vapor enthalpy (J/Kg)	363712 [J/Kg] at a temperature of 25°C
Specific heat capacity (J/(Kg·K))	2178

Henry's constant (mol/(m ³ ·Pa))	41543
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Behaviour at sea

Log kow	3.4
Log koc	2.17
Bioconcentration factor (BCF)	81

Additional data

Colour	colourless
Odour	mild pleasant odour

MARPOL pollution category	Category	Description
	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.

Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	30
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	olefins
IMO class	3.1

Reactivity data

Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	3 - ≥3 and <4
Bioaccumulation (A1)	3 - Moderate potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	1 - Mildly irritating

Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	E - Evaporator
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold



Hazard statements	Physical	
	H225	Highly flammable liquid and vapour.
	Health	
	H304	May be fatal if swallowed and enters airways.
Precautionary statements	Prevention	
	P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
	P243	Take precautionary measures against static discharge.
	P280	Wear protective gloves/protective clothing/eye protection/face protection.
	Response	
	P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
	P303 + P361 + P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P331	Do NOT induce vomiting.	
TLV-TWA	500	
ERPG-2 (ppm)	500	
ERPG-3 (ppm)	5000	

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	2.4
Lowest median lethal concentration (LC50) on crustacean (mg/l)	30
Lowest median lethal concentration (LC50) on fishes (mg/l)	1.3
Assessment factor (AF)	1 on the short term
Predicted No Effect Concentration (PNEC) (µg/l)	111 [µg/l] on the short term

1-METHYL-2-PYRROLIDONE

CAS Number: 872-50-4

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 872-50-4

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1030 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	99
Density of gas (kg/m ³)	4.39
Boiling Point (°C)	202
Melting Point (°C)	-17
Vapour Pressure (Pa)	66000 (25C) [Pa] at a temperature of 20°C
Ignition Temperature (°C)	270
Flash Point (°C)	96
Lower explosivity limit (LEL) (volume %)	0.99
Upper explosivity limit (UEL) (volume %)	3.9

Behaviour at sea

Additional data

Colour	white
Odour	mild fishy
Standard behavior classification	D/DE

Transportation data

State	liquid
Temperature (°C)	ambient
Family name	aromatic amines

Reactivity data

Water	No
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Acid(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TEEL-1 (mg/m3)	10 ppm
TEEL-2 (mg/m3)	25 ppm
TEEL-3 (mg/m3)	25 ppm

Ecotoxicity

1-METHYLNAPHTALENE molten

UN Number: 3082

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 3082

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1020 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	142.2
Density of gas (kg/m ³)	6.33
Boiling Point (°C)	240/243
Melting Point (°C)	-3.6
Ignition Temperature (°C)	529
Flash Point (°C)	82

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	32
State	liquid
Temperature (°C)	ambient
Family name	aromatic hydrocarbons

Reactivity data

Water	No
Acid(s)	Yes

Oxidizing agents

Yes

GESAMP Hazard profile

Human toxicity threshold

Ecotoxicity

1-METHYLPYRROLIDONE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1030 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	99
Density of gas (kg/m ³)	1030
Boiling Point (°C)	202
Melting Point (°C)	-24
Ignition Temperature (°C)	270
Flash Point (°C)	96
Lower explosivity limit (LEL) (volume %)	0.99
Upper explosivity limit (UEL) (volume %)	3.9

Behaviour at sea

Additional data

Colour	white
Odour	mild fish odour

Transportation data

State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m ³)	10
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TEEL-2 (mg/m3)	25
TEEL-3 (mg/m3)	25

Ecotoxicity

1-NITROPROPANE

UN Number: 2608 - CAS Number: 108-03-2

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2608
CAS number	108-03-2

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1000 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	89.09
Density of gas (kg/m ³)	3.94
Boiling Point (°C)	120
Melting Point (°C)	-91
Vapour Pressure (Pa)	1700 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	404
Flash Point (°C)	28
Lower explosivity limit (LEL) (volume %)	2.5

Behaviour at sea

Additional data

Colour	colourless
Odour	mild fruity
Standard behavior classification	FED

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	42
State	liquid
Temperature (°C)	ambient
Family name	nitro compounds

IMO class	3.3
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Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	1 - ≥1 and <10
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	0 - Not irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	FED - Floater/Evaporator/Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

IDHL	1000
TLV-TWA	25

Ecotoxicity

1-Nonene

UN Number: 1993 - CAS Number: 27215-95-8

Also known as: Propylene Trimer, Propene Trimer, Pt 3, Olefin Mixture, Nonene, 1-Nonene, Non-1-Ene

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1993
CAS number	27215-95-8
Formula	C ₉ H ₁₈

Physical chemical data

Physical State (25°C)	Liquid
Kinematic viscosity (cSt)	0.851 [cSt] at a temperature of 20°C 0.80794 [cSt] at a temperature of 25°C
Molar mass (g/mol)	126.239
Solubility (g/L)	3.6 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	146.9
Melting Point (°C)	-81.3
Critical molar volume (m ³ /mol)	0.000526
Critical temperature (°C)	594
Critical pressure (Pa)	2431800
Surface tension (mN/m)	22.56 [mN/m] at a temperature of 25°C
Flash Point (Cleveland open cup) (°C)	26
Lower explosivity limit (LEL) (volume %)	0.7
Upper explosivity limit (UEL) (volume %)	3.9
Vapor enthalpy (J/Kg)	287629 [J/Kg] at a temperature of 146.9°C 360586 [J/Kg] at a temperature of 25°C
Combustion enthalpy (J/Kg)	44146000
Specific heat capacity (J/(Kg·K))	2142
Henry's constant (mol/(m ³ ·Pa))	100312

Behaviour at sea

Log k _{ow}	4.55
Log k _{oc}	2.9

Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Bioconcentration factor (BCF)	1843

Additional data

MARPOL pollution category	Category	Description
	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.

Transportation data

Reactivity data

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	4 - ≥ 4 and < 5
Bioaccumulation (A1)	4 - High potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Specific Health Concern (D3)	A - Aspiration
Interference with coastal amenities (E2)	FE - Floater/Evaporator
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Hazard statements	Physical	Health
	H226	Flammable liquid and vapour.
	H304	May be fatal if swallowed and enters airways.

Precautionary statements**Prevention**

- P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
- P233 Keep container tightly closed.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting/.../equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response

- P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P331 Do NOT induce vomiting.
- P370 + P378 In case of fire: Use ... for extinction.

Storage

- P403 + P235 Store in a well-ventilated place. Keep cool.
- P405 Store locked up.

Disposal

- P501 Dispose of contents/container to ...

Ecotoxicity

Lowest median lethal concentration (LC50) on fishes (mg/l)	3
Highest no observed effect concentration (NOEC) on algae (mg/l)	3.2
Highest no observed effect concentration (NOEC) on fishes (mg/l)	1

1-OCTENE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	715 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	112.22
Density of gas (kg/m ³)	5.03
Boiling Point (°C)	121.5
Melting Point (°C)	-101
Vapour Pressure (Pa)	400 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	256
Flash Point (°C)	-7
Lower explosivity limit (LEL) (volume %)	0.7
Upper explosivity limit (UEL) (volume %)	3.9

Behaviour at sea

Persistence (days)	0.8
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Additional data

Colour	colourless
Odour	gasoline odour
Standard behavior classification	E, FE, F

Transportation data

Cargo group	30
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	olefins

Reactivity data

Water	No
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Acid(s)	Yes
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GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	4 - ≥ 4 and < 5
Bioaccumulation (A1)	4 - High potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Specific Health Concern (D3)	A - Aspiration
Interference with coastal amenities (E2)	FE - Floater/Evaporator
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

ERPG-1 (ppm)	40
ERPG-2 (ppm)	800
ERPG-3 (ppm)	2000

Ecotoxicity

1-PENTENE

UN Number: 1108 - CAS Number: 109-67-1

Also known as: alpha-n-AMYLENE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1108
CAS number	109-67-1

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	600 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	70.13
Density of gas (kg/m ³)	3.1
Boiling Point (°C)	30
Melting Point (°C)	-165
Vapour Pressure (Pa)	66000 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	273
Flash Point (°C)	-20
Lower explosivity limit (LEL) (volume %)	1.4
Upper explosivity limit (UEL) (volume %)	8.7

Behaviour at sea

Additional data

Colour	colourless
Odour	gasoline

Transportation data

Transport mode	Bulk, Packaged
Cargo group	30
State	liquid
Temperature (°C)	ambient

Family name	olefins
IMO class	3.1

Reactivity data

Water	No
Acid(s)	Yes
Static electricity	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	2 - ≥ 2 and < 3
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	0 - Not irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	E - Evaporator
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

TEEL-1 (mg/m3)	750 ppm
TEEL-2 (mg/m3)	6000 ppm
TEEL-3 (mg/m3)	75000 ppm

Ecotoxicity

1-PHENYL-1-XYLYLETHANE

CAS Number: 40766-31-2

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 40766-31-2

Physical chemical data

Density (kg/m³) 983 [Kg/m³] at a temperature of 20°C

Molar mass (g/mol) 210.3

Flash Point (°C) 143

Behaviour at sea

Additional data

Colour colourless

Odour odourless

Standard behavior classification FD/FED/E

Transportation data

Cargo group 32

Family name aromatic hydrocarbons

Reactivity data

Water No

Acid(s) Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A) 5 - ≥ 5 and \leq ca.7

Bioaccumulation in BCF (A1B) 4 - ≥ 500 and < 4000

Bioaccumulation (A1) 4 - High potential to bioaccumulate

Biodegradation (A2) NR - Not readily biodegradable

Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l)) 2 - Slightly toxic

Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg)) 1 - Slight

Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Eye irritation/corrosivity (D2)	0 - Not irritating
Interference with coastal amenities (E2)	F - Floating substance, not likely to evaporate or to dissolve quickly
Effects on wildlife and bottom habitats (E3)	1 - Is a floater; and/or is slightly acutely toxic; and/or is mildly irritant to skin and/or eyes

Human toxicity threshold

Ecotoxicity

1-UNDECENE

CAS Number: 821-95-4

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 821-95-4

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	750 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	154.2
Boiling Point (°C)	192.9
Vapour Pressure (Pa)	400 [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Colour	colourless
Odour	gasoline odour

Transportation data

Cargo group	30
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	olefins

Reactivity data

Water	No
Acid(s)	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	5 - ≥ 5 and \leq ca.7
Bioaccumulation (A1)	5 - Very high potential to bioaccumulate

Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Specific Health Concern (D3)	A - Aspiration
Interference with coastal amenities (E2)	F - Floating substance, not likely to evaporate or to dissolve quickly
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

Ecotoxicity

1.6-DICHLOROHEXANE

UN Number: 3082 - CAS Number: 2163-00-0

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	3082
CAS number	2163-00-0

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1070 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	155.07
Melting Point (°C)	-13
Vapour Pressure (Pa)	500 [Pa] at a temperature of 20°C
Flash Point (°C)	74

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless
Standard behavior classification	S/SD/D

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	36
State	liquid
Temperature (°C)	ambient
Family name	halogenated hydrocarbons

Reactivity data

Water	No
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GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	3 - ≥ 3 and < 4
Bioaccumulation (A1)	3 - Moderate potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Eye irritation/corrosivity (D2)	0 - Not irritating
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly
Effects on wildlife and bottom habitats (E3)	0 - Is not a floater; and does not pose any known health hazards

Human toxicity threshold

Ecotoxicity

2,2'-DICHLOROISOPROPYL ETHER

UN Number: 2490

Also known as: BIS,(2-CHLOROISOPROPYL)ETHER, di-(2-CHLOROISOPROPYL)ETHER, 2,2'-DICHLOROISOPROPYL ETHER

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 2490

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1112 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	171.07
Density of gas (kg/m ³)	7.6
Boiling Point (°C)	187.3
Melting Point (°C)	1.051652893
Vapour Pressure (Pa)	< 200 [Pa] at a temperature of 20°C
Flash Point (°C)	77

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless
Standard behavior classification	SD

Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	36
State	liquid
Temperature (°C)	ambient
Family name	halogenated hydrocarbons

IMO class	6.1
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Reactivity data

Water	No
Oxidizing agents	Yes

GESAMP Hazard profile

Biodegradation (A2)	NR - Not readily biodegradable
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Human toxicity threshold

TEEL-1 (mg/m3)	10 ppm
TEEL-2 (mg/m3)	75 ppm
TEEL-3 (mg/m3)	350 ppm

Ecotoxicity

2,2,4-Trimethyl-1,3-Pentanediol-1-Isobutyrate

CAS Number: 25265-77-4

Also known as: Texanol, 2,2,4-Trimethyl-1,3-Pentanediol Monoisobutyrate, Propanoic Acid, 2-Methyl-, 3-Hydroxy-2,2,4-Trimethylpentyl Ester, Propanoic Acid, 2-Methyl-, Monoester With 2,2,4-Trimethyl-1,3-Pentanediol, 2,2,4-Trimethyl-1,3-Pentanediol-1-Isobutyrate

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number	25265-77-4
Formula	C ₁₂ H ₂₄ O ₃

Physical chemical data

Physical State (25°C)	Liquid
Density (kg/m ³)	957.7 [Kg/m ³] at a temperature of 5°C 954.2 [Kg/m ³] at a temperature of 10°C 947.7 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	45.625 [cSt] at a temperature of 5°C 34.972 [cSt] at a temperature of 10°C 19.996 [cSt] at a temperature of 20°C
Molar mass (g/mol)	216.32
Solubility (g/L)	858 [g/L] at a temperature of 25°C and salinity of 0‰ 970 [g/L] at a temperature of 20°C and salinity of 0‰ 870 [g/L] at a temperature of 20°C and salinity of 5‰ 660 [g/L] at a temperature of 20°C and salinity of 30‰
Boiling Point (°C)	244
Melting Point (°C)	-50
Surface tension (mN/m)	28.6 [mN/m] at a temperature of 22°C 29.46 [mN/m] at a temperature of 6.2°C 28.73 [mN/m] at a temperature of 12.4°C 28.12 [mN/m] at a temperature of 19.5°C
Flash Point (Pensky-Martens closed cup) (°C)	122
Flash Point (Cleveland open cup) (°C)	120
Henry's constant (mol/(m ³ ·Pa))	0.01

Behaviour at sea

Log kow	3.47
Log koc	1.47
Biodegradation in estuary environment (Half-life) (days)	16.5

Additional data

MARPOL pollution category	Category	Description
	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.

Transportation data

Reactivity data

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	3 - ≥ 3 and < 4
Bioaccumulation (A1)	3 - Moderate potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	FE - Floater/Evaporator
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	18.4
Lowest median lethal concentration (LC50) on crustacean (mg/l)	> 95
Lowest median lethal concentration (LC50) on fishes (mg/l)	30

Highest no observed effect concentration (NOEC) on algae (mg/l)	3.28
Assessment factor (AF)	10000 on the short term
Predicted No Effect Concentration (PNEC) (µg/l)	2 [µg/l] on the short term

2,2-DICHLOROPROPIONIC ACID

CAS Number: 75-99-0

Also known as: ACIDE 2,2-DICHLOROPROPIONIQUE, 2,2-DICHLOROPROPANOIC ACID

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 75-99-0

Physical chemical data

Physical State (20°C)	Liquid
Molar mass (g/mol)	142.97
Boiling Point (°C)	500/900
Melting Point (°C)	185/190
Vapour Pressure (Pa)	< 10 [Pa] at a temperature of 20°C
Flash Point (°C)	> 110

Behaviour at sea

Additional data

Transportation data

State liquid

Reactivity data

Water Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	2 - ≥ 2 and < 3
Bioaccumulation in BCF (A1B)	2 - ≥ 10 and < 100
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic

Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Skin irritation/corrosivity (D1)	3 - Corrosive
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

Ecotoxicity

2,2-DIMETHYLPROPANE-1,3-DIOL

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	1060 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	104.14
Boiling Point (°C)	208
Melting Point (°C)	123/127
Flash Point (°C)	107

Behaviour at sea

Additional data

Transportation data

State	solid
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Reactivity data

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating

Interference with coastal amenities (E2)	FD - Floater/Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

TEEL-1 (mg/m3)	600 ppm
TEEL-2 (mg/m3)	600 ppm
TEEL-3 (mg/m3)	600 ppm

Ecotoxicity

2,4-DICHLOROPHENOL solid

UN Number: 2020 - CAS Number: 120-83-2

Also known as: DICHLOROPHENOL(S) solide

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2020
CAS number	120-83-2

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	1400 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	163.01
Density of gas (kg/m ³)	1400
Boiling Point (°C)	216
Melting Point (°C)	45
Vapour Pressure (Pa)	100 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	500
Flash Point (°C)	113

Behaviour at sea

Persistence (days)	1.9
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Additional data

Colour	colourless
Odour	medicine odour

Transportation data

Transport mode	Bulk, Packaged
Package group	III
State	solid
IMO class	6.1

Reactivity data

Water	No
Acid(s)	No
Base(s)	No
Metal(s) and alloys	No
Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	3 - ≥ 3 and < 4
Bioaccumulation in BCF (A1B)	2 - ≥ 10 and < 100
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	2 - Moderate
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	3 - Moderately high
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

ERPG-1 (ppm)	0.2
ERPG-3 (ppm)	20

Ecotoxicity

2,4-DICHLOROPHENOXY ACETIC ACID solid

UN Number: 3077

Also known as: ACIDE DICHLORO-2,4 PHENOXYACETIQUE solide, AGRIBEN, AGROTECT, AMIDOX, AMOXONE, AQUA-KEEN, CLOFIBRAAT, 2,4-D, DACAMINE, DECAMINE, DICITOX, DIOTOX

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 3077

Physical chemical data

Physical State (20°C)	Solid
Molar mass (g/mol)	221
Melting Point (°C)	140
Vapour Pressure (Pa)	99 [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Colour	white to tan
Odour	odourless

Transportation data

State	solid
Temperature (°C)	ambient
Pressure (Pa)	ambient

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

IDHL 50

Ecotoxicity

2,6-DIETHYLANILINE

Also known as: ANILINE, 2,6-DIEHYL, BENZENEAMINO, 2,6-DIETHYL-(ACL)

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	959 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	149.24
Density of gas (kg/m ³)	6.64
Boiling Point (°C)	242
Vapour Pressure (Pa)	< 13 [Pa] at a temperature of 20°C
Flash Point (°C)	99

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless
Standard behavior classification	FD/F

Transportation data

State	liquid
Temperature (°C)	ambient
Family name	aromatic amines

Reactivity data

Water	No
Acid(s)	Yes
Metal(s) and alloys	Yes (Cu)
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	3 - ≥ 3 and < 4
Bioaccumulation in BCF (A1B)	3 - ≥ 100 and < 500
Bioaccumulation (A1)	3 - Moderate potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	FD - Floater/Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

TEEL-1 (mg/m3)	10
TEEL-2 (mg/m3)	60
TEEL-3 (mg/m3)	350

Ecotoxicity

2-(2-AMINOETHOXY)ETHANOL

UN Number: 3055 - CAS Number: 929-06-6

Also known as: DGA, DIGLYCOLAMINE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	3055
CAS number	929-06-6

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1060 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	105.14
Boiling Point (°C)	221
Melting Point (°C)	-12
Vapour Pressure (Pa)	2000 [Pa] at a temperature of 20°C
Flash Point (°C)	127

Behaviour at sea

Additional data

Transportation data

Transport mode	Bulk, Packaged
Package group	III
State	liquid
Family name	alkanolamines

Reactivity data

Acid(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TEEL-1 (mg/m3)	35
TEEL-2 (mg/m3)	250
TEEL-3 (mg/m3)	500

Ecotoxicity

2-AMINO-2-METHYL-1-PROPANOL (90% or less)

CAS Number: 124-68-5

Also known as: 2-AMINODIMETHYLETHANOL, beta-AMINOISOBUTANOL, AMP 95

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 124-68-5

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	935 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	89.14
Density of gas (kg/m ³)	> 1.29
Boiling Point (°C)	165
Melting Point (°C)	-2
Vapour Pressure (Pa)	10400 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	446
Flash Point (°C)	87
Lower explosivity limit (LEL) (volume %)	1.1/1.5
Upper explosivity limit (UEL) (volume %)	9.2/10.1

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless
Standard behavior classification	D/DE

Transportation data

State	liquid
Temperature (°C)	ambient

Family name	alkanolamines
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Reactivity data

Water	No
Acid(s)	Yes
Base(s)	No
Metal(s) and alloys	Yes (Al, Cu)
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	DE - Dissolver/Evaporator
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TEEL-1 (mg/m3)	0.075
TEEL-2 (mg/m3)	0.6
TEEL-3 (mg/m3)	500

Ecotoxicity

2-Butoxyethanol

CAS Number: 111-76-2

Also known as: 2-Be, 2-Butoxy-1-Ethanol, Egbe, Ethylene Glycol Monobutyl Ether, Ethylene Glycol Mono-N-Butyl Ether, Ethylene Glycol N-Butyl Ether, Glycol Monobutyl Ether, Glycol Ether Eb, Monobutyl Glycol Ether, Butoxyethanol, O-Butyl Ethylene Glycol, Butylglycol, 3-Oxa-1-Heptanol, Monobutyl Ethylene Glycol Ether, Ether Monobutylque De L'Ethylene Glycol, 2-Butoxyethanol, 2-Butoxy Ethanol

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number	111-76-2
Formula	C ₆ H ₁₄ O ₂

Physical chemical data

Physical State (25°C)	Liquid
Kinematic viscosity (cSt)	3.62 [cSt] at a temperature of 20°C 3.15 [cSt] at a temperature of 25°C
Molar mass (g/mol)	118.17
Solubility (g/L)	900000 [g/L] at a temperature of 20°C and salinity of 0‰ 900000 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	168.4
Melting Point (°C)	-72.5
Critical molar volume (m ³ /mol)	0.000424
Critical temperature (°C)	634
Critical pressure (Pa)	3270000
Surface tension (mN/m)	26.55 [mN/m] at a temperature of 20°C 26.14 [mN/m] at a temperature of 25°C
Flash Point (Pensky-Martens closed cup) (°C)	60
Flash Point (Cleveland open cup) (°C)	69
Lower explosivity limit (LEL) (volume %)	1.1
Upper explosivity limit (UEL) (volume %)	10.1
Vapor enthalpy (J/Kg)	478886 [J/Kg] at a temperature of 25°C
Combust enthalpy (J/Kg)	30100000
Specific heat capacity (J/(Kg·K))	312.22
Combustion efficiency (%)	98
Mass flow rate of the combustion surface (Kg/(m ² ·s))	0.04

Rad fraction (%)	23
Henry's constant (mol/(m ³ ·Pa))	0.16

Behaviour at sea

Log kow	0.84
Log koc	1.81
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Biodegradation in marine environment (Half-life) (days)	10
Bioconcentration factor (BCF)	0.97

Additional data

MARPOL pollution category	Category	Description
	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.

Transportation data

Reactivity data

GESAMP Hazard profile

Interference with coastal amenities (E2)	G - Gas
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Human toxicity threshold



IDHL	700
Hazard statements	Health
	H302 Harmful if swallowed.
	H312 Harmful in contact with skin.
	H315 Causes skin irritation.
	H319 Causes serious eye irritation.
	H332 Harmful if inhaled.

Precautionary statements	Prevention
	P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
	P264 Wash ... thoroughly after handling.
	P270 Do not eat, drink or smoke when using this product.
	P271 Use only outdoors or in a well-ventilated area.
	P280 Wear protective gloves/protective clothing/eye protection/face protection.
	Response
	P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
	P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
	P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
	P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P321 Specific treatment (see ... on this label).
	P332 + P313 If skin irritation occurs: Get medical advice/attention.
	P337 + P313 If eye irritation persists: Get medical advice/attention.
	P362 Take off contaminated clothing and wash before reuse.

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	911
Lowest median lethal concentration (LC50) on crustacean (mg/l)	540
Lowest median lethal concentration (LC50) on fishes (mg/l)	983
Highest no observed effect concentration (NOEC) on algae (mg/l)	286
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	100
Highest no observed effect concentration (NOEC) on fishes (mg/l)	> 100
Assessment factor (AF)	100 on the short term 100 on the long term
Predicted No Effect Concentration (PNEC) (µg/l)	5400 [µg/l] on the short term 1000 [µg/l] on the long term

2-CHLOROPROPIONIC ACID

UN Number: 2511

Also known as: ACIDE 2-CHLOROPROPIONIQUE, 2-CHLOROPROPANOIC ACID, alpha-CHLOROPROPIONIC ACID

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 2511

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1258 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	108.53
Density of gas (kg/m ³)	4.77
Boiling Point (°C)	186
Vapour Pressure (Pa)	< 200 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	500
Flash Point (°C)	107.2
Lower explosivity limit (LEL) (volume %)	3.6 (E)

Behaviour at sea

Additional data

Colour	pale yellow
Odour	slight

Transportation data

Transport mode	Bulk, Packaged
Package group	III
State	liquid
Temperature (°C)	ambient
Family name	organic acids

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	3 - Moderately high
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	3A - Corrosive
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TLV-TWA 0.1

Ecotoxicity

2-ETHYL-3-PROPYL ACROLEIN

UN Number: 1191 - CAS Number: 645-62-5

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1191
CAS number	645-62-5

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	857 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	126.2
Boiling Point (°C)	175
Vapour Pressure (Pa)	< 345 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	200
Flash Point (°C)	68

Behaviour at sea

Additional data

Colour	yellow
Odour	odourless
Standard behavior classification	F/FE

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	19
Temperature (°C)	ambient
Family name	aldehydes

Reactivity data

Water	No
Acid(s)	Yes

Base(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	2 - ≥ 2 and < 3
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	FE - Floater/Evaporator
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

Ecotoxicity

2-ETHYLHEXANOIC ACID

CAS Number: 149-57-5

Also known as: ACIDE 2-ETHYLHEXANOIQUE, BUTYLETHYLACETIC ACID, 2-Ethylcaproic Acid, 2-Ethylhexanoic Acid, Ethylhexoic Acid, Ethylhexanoic Acid, 2-Ethylhexanoic Acid, Acide 2-Ethylhexanoïque

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number	149-57-5
Formula	C ₈ H ₁₆ O ₂

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m³)	908 [Kg/m ³] at a temperature of 20°C 903.1 [Kg/m ³] at a temperature of 25°C 917.3 [Kg/m ³] at a temperature of 5°C 914.2 [Kg/m ³] at a temperature of 10°C 906.1 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	8.64 [cSt] at a temperature of 20°C 17.911 [cSt] at a temperature of 5°C 14.034 [cSt] at a temperature of 10°C 9.2815 [cSt] at a temperature of 20°C
Molar mass (g/mol)	144.21
Density of gas (kg/m³)	6.45
Solubility (g/L)	2000 [g/L] at a temperature of 20°C and salinity of 0‰ 1400 [g/L] at a temperature of 25°C and salinity of 0‰ 1640 [g/L] at a temperature of 20°C and salinity of 0‰ 1680 [g/L] at a temperature of 20°C and salinity of 5‰ 960 [g/L] at a temperature of 20°C and salinity of 30‰
Boiling Point (°C)	227
Melting Point (°C)	-83
Critical molar volume (m³/mol)	0.000528
Critical temperature (°C)	674
Critical pressure (Pa)	2780000

Surface tension (mN/m)	28.42 [mN/m] at a temperature of 6.9°C 27.62 [mN/m] at a temperature of 11.2°C 26.86 [mN/m] at a temperature of 19.5°C
Ignition Temperature (°C)	440
Flash Point (°C)	118
Flash Point (Pensky-Martens closed cup) (°C)	114
Flash Point (Cleveland open cup) (°C)	118
Lower explosivity limit (LEL) (volume %)	1.4
Upper explosivity limit (UEL) (volume %)	8.64
Vapor enthalpy (J/Kg)	524563 [J/Kg] at a temperature of 25°C
Henry's constant (mol/(m ³ ·Pa))	0.28

Behaviour at sea

Log kow	2.64
Log koc	1.43
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Bioconcentration factor (BCF)	3

Additional data

Colour	colourless				
Odour	mild				
MARPOL pollution category	<table border="1"> <thead> <tr> <th>Category</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Y</td> <td>Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.</td> </tr> </tbody> </table>	Category	Description	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.
Category	Description				
Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.				
Standard behavior classification	FD				

Transportation data

State	liquid
Temperature (°C)	ambient
Family name	organic acids

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	Yes

Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	2 - ≥ 2 and < 3
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	FD - Floater/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



Hazard statements	Health	
	H361	Suspected of damaging fertility or the unborn child.
TEEL-1 (mg/m3)	15	
TEEL-2 (mg/m3)	125	
TEEL-3 (mg/m3)	500	

Ecotoxicity

Lowest median lethal concentration (LC50) on fishes (mg/l)	70
Highest no observed effect concentration (NOEC) on algae (mg/l)	0.45
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	18
Assessment factor (AF)	500 on the short term
Predicted No Effect Concentration (PNEC) ($\mu\text{g/l}$)	36 [$\mu\text{g/l}$] on the short term

2-ETHYLHEXANOL

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	834 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	130.23
Density of gas (kg/m ³)	5.79
Boiling Point (°C)	184.9
Melting Point (°C)	< -76
Ignition Temperature (°C)	231
Flash Point (°C)	73
Lower explosivity limit (LEL) (volume %)	1.1
Upper explosivity limit (UEL) (volume %)	7.4

Behaviour at sea

Additional data

Colour	colourless
Odour	weak odour

Transportation data

Cargo group	20
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	alcohols, glycols

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes

Organic substance

Yes

GESAMP Hazard profile

Human toxicity threshold

ERPG-1 (ppm)	0.1
ERPG-2 (ppm)	100
ERPG-3 (ppm)	200

Ecotoxicity

2-ETHYLHEXYL ACRYLATE inhibited

CAS Number: 103-11-7

Also known as: ACRYLATE D'ETHYL-2 HEXYLE, ACRYLIC ACID, 2-ETHYLHEXYL ESTER, 2-Ethyl-1-Hexyl Acrylate, 2-Ethylhexyl 2-Propenoate, 2-Propenoic Acid, 2-Ethylhexyl Ester, Acrylic Acid, 2-Ethylhexyl Ester, Ethylhexyl Acrylate, 2-Ethylhexylprop-2-Enoate, 2-Ethylhexyl Acrylate, Acrylate D'Ethyl 2-Hexyle

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number	103-11-7
Formula	C ₁₁ H ₂₀ O ₂

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	885 [Kg/m ³] at a temperature of 20°C 897 [Kg/m ³] at a temperature of 5°C 891.8 [Kg/m ³] at a temperature of 10°C 886.1 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	4.4482 [cSt] at a temperature of 5°C 4.1826 [cSt] at a temperature of 10°C 6.2634 [cSt] at a temperature of 20°C
Molar mass (g/mol)	184.2
Density of gas (kg/m ³)	8.192
Solubility (g/L)	100 [g/L] at a temperature of 25°C and salinity of 0‰ 36 [g/L] at a temperature of 20°C and salinity of 0‰ 35 [g/L] at a temperature of 20°C and salinity of 5‰ 21 [g/L] at a temperature of 20°C and salinity of 30‰
Boiling Point (°C)	214
Melting Point (°C)	-90
Surface tension (mN/m)	26 [mN/m] at a temperature of 20°C 27.91 [mN/m] at a temperature of 5.4°C 27.68 [mN/m] at a temperature of 11.3°C 26.82 [mN/m] at a temperature of 19.3°C
Interfacial tension (mN/m)	30 [mN/m] at a temperature of 20°C and salinity of 0‰

Vapour Pressure (Pa)	13 [Pa] at a temperature of 20°C 24 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	384
Flash Point (°C)	82
Flash Point (Pensky-Martens closed cup) (°C)	87.5
Lower explosivity limit (LEL) (volume %)	0.87
Upper explosivity limit (UEL) (volume %)	6.4
Combustion enthalpy (J/Kg)	33800000
Combustion efficiency (%)	96
Mass flow rate of the combustion surface (Kg/(m ² ·s))	0.05
Rad fraction (%)	23
Henry's constant (mol/(m ³ ·Pa))	45

Behaviour at sea

Log kow	4.09
Log koc	3.73
Biodegradation in estuary environment (Half-life) (days)	6205
Biodegradation in marine environment (Half-life) (days)	10
Bioconcentration factor (BCF)	412

Additional data

Colour	colourless
Odour	sharp odour

MARPOL pollution category	Category	Description
	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.

Transportation data

Package group	II
Cargo group	14
State	liquid
Temperature (°C)	< 38
Pressure (Pa)	ambient
Family name	acrylates

Reactivity data

Water	No
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Acid(s)	No
Base(s)	No
Metal(s) and alloys	No
Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	3 - ≥ 3 and < 4
Bioaccumulation (A1)	3 - Moderate potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	F - Floating substance, not likely to evaporate or to dissolve quickly
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



Hazard statements	Health
	H315 Causes skin irritation.
	H317 May cause an allergic skin reaction.
	H335 May cause respiratory irritation.
TEEL-1 (mg/m3)	1.5
TEEL-2 (mg/m3)	10
TEEL-3 (mg/m3)	10

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	1.71
Lowest median lethal concentration (LC50) on crustacean (mg/l)	1.3
Lowest median lethal concentration (LC50) on fishes (mg/l)	1.8
Highest no observed effect concentration (NOEC) on algae (mg/l)	0.8

Highest no observed effect concentration (NOEC) on crustacean (mg/l)	0.19
Assessment factor (AF)	100 on the short term 10000 on the long term
Predicted No Effect Concentration (PNEC) (µg/l)	13 [µg/l] on the short term 0.13 [µg/l] on the long term

2-ETHYLHEXYLAMINE

UN Number: 2276

Also known as: ALKYLAMINES, 1-AMINO-2-ETHYLHEXANE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 2276

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	800 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	129.25
Density of gas (kg/m ³)	5.805
Boiling Point (°C)	169
Melting Point (°C)	< -76
Vapour Pressure (Pa)	27 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	265
Flash Point (°C)	50

Behaviour at sea

Additional data

Colour	colourless
Odour	musky ammonia
Standard behavior classification	FD

Transportation data

Transport mode	Bulk, Packaged
Package group	III
State	liquid
Temperature (°C)	ambient
Family name	aliphatic amines
IMO class	3.3

Reactivity data

Water	No
Acid(s)	Yes
Metal(s) and alloys	Yes (Al, Cu, Zn)
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Human toxicity threshold

Ecotoxicity

2-HYDROXY-4-(METHYLTHIO)-BUTANOIC ACID

CAS Number: 583-91-5

Also known as: ACIDE 2-HYDROXY-4-(METHYLTHIO)-BUTANOIQUE, BUTYRIC ACID, 2-HYDROXY-4-METHYLTHIO-

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 583-91-5

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m³)	1220 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	150.2
Density of gas (kg/m³)	6.7
Ignition Temperature (°C)	160
Flash Point (°C)	121

Behaviour at sea

Additional data

Colour	light brown
Odour	odourless
Standard behavior classification	SD/D/DE

Transportation data

Family name organic acids

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes

Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

Ecotoxicity

2-HYDROXYETHYL ACRYLATE inhibited

CAS Number: 818-61-1

Also known as: ACRYLATE D'HYDROXY-2 ETHYLE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 818-61-1

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1100 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	116.1
Boiling Point (°C)	310
Melting Point (°C)	-60.2
Vapour Pressure (Pa)	10100 [Pa] at a temperature of 20°C
Flash Point (°C)	101
Lower explosivity limit (LEL) (volume %)	1.8

Behaviour at sea

Additional data

Colour	colourless
Odour	sweet, pleasant odour
Standard behavior classification	DE, D

Transportation data

State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient

Reactivity data

Water	No
Acid(s)	No

Base(s)	No
Metal(s) and alloys	No
Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - $e < 1$, or $> ca. 7$, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	3 - Moderately high
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TEEL-3 (mg/m3) 50

Ecotoxicity

2-METHYL-5-ETHYL PYRIDINE

UN Number: 2300 - CAS Number: 104-90-5

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2300
CAS number	104-90-5

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	922 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	122.19
Vapour Pressure (Pa)	120 [Pa] at a temperature of 20°C

Behaviour at sea

Persistence (days)	1.6
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Additional data

Standard behavior classification	FD
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Transportation data

Package group	III
IMO class	6.1

Reactivity data

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	2 - ≥ 2 and < 3
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury

Interference with coastal amenities (E2)	FD - Floater/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

Ecotoxicity

2-METHYL-6-ETHYL ANILINE

CAS Number: 24549-06-2

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 24549-06-2

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	969 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	135.2
Boiling Point (°C)	231
Melting Point (°C)	-33
Flash Point (°C)	102

Behaviour at sea

Additional data

Colour	colourless
Odour	pungent
Standard behavior classification	FD/FED/E

Transportation data

State	liquid
Temperature (°C)	ambient
Family name	aromatic amines

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	2 - ≥ 2 and < 3
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	FD - Floater/Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

2-METHYLPYRIDINE

UN Number: 2313 - CAS Number: 109-06-8

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2313
CAS number	109-06-8

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	944 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	93.13
Density of gas (kg/m ³)	4.13
Boiling Point (°C)	128.8
Melting Point (°C)	-66.8
Vapour Pressure (Pa)	1200 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	538
Flash Point (°C)	26
Lower explosivity limit (LEL) (volume %)	1.4
Upper explosivity limit (UEL) (volume %)	8.6

Behaviour at sea

Additional data

Colour	colourless
Odour	strong, unpleasant

Transportation data

Transport mode	Bulk, Packaged
Package group	III
State	liquid
Temperature (°C)	ambient
Family name	aromatic amines
IMO class	3.3

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TEEL-1 (mg/m3)	5 ppm
TEEL-2 (mg/m3)	5 ppm
TEEL-3 (mg/m3)	300 ppm

Ecotoxicity

2-NITROPROPANE

UN Number: 2608

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 2608

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1000 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	89.09
Density of gas (kg/m ³)	3.94
Boiling Point (°C)	132
Melting Point (°C)	-108
Vapour Pressure (Pa)	1000 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	428
Flash Point (°C)	36
Lower explosivity limit (LEL) (volume %)	2.2

Behaviour at sea

Additional data

Colour	colourless
Odour	mild fruity
Standard behavior classification	FED

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	42
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	nitro compounds

IMO class	3.3
Reactivity data	
Water	No
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	No
Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	1 - ≥1 and <10
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	0 - Not irritating
Eye irritation/corrosivity (D2)	0 - Not irritating
Specific Health Concern (D3)	C - Carcinogenicity
Interference with coastal amenities (E2)	FED - Floater/Evaporator/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

IDHL	1000
TLV-TWA	25
TEEL-1 (mg/m3)	30 ppm
TEEL-2 (mg/m3)	50 ppm
TEEL-3 (mg/m3)	100 ppm

Ecotoxicity

3,4-DICHLORO-1-BUTENE

CAS Number: 760-23-6

Also known as: 3,4 DCB, 3,4-DICHLOROBUTENE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 760-23-6

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1150 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	125
Density of gas (kg/m ³)	5.48
Boiling Point (°C)	119
Melting Point (°C)	-61
Vapour Pressure (Pa)	1866 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	450
Flash Point (°C)	29
Lower explosivity limit (LEL) (volume %)	2.4
Upper explosivity limit (UEL) (volume %)	13.3

Behaviour at sea

Additional data

Colour	colourless to brown
Odour	characteristic pungent
Standard behavior classification	S/SD

Transportation data

Cargo group	36
State	liquid
Family name	halogenated hydrocarbons

Reactivity data

Water

No

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	2 - ≥ 2 and < 3
Bioaccumulation in BCF (A1B)	2 - ≥ 10 and < 100
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

Ecotoxicity

3-METHOXY-1-BUTANOL

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	928 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	104.14
Boiling Point (°C)	161
Melting Point (°C)	-85
Flash Point (°C)	46

Behaviour at sea

Additional data

Transportation data

State liquid

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

Ecotoxicity

3-METHOXYBUTYL ACETATE

CAS Number: 1809-19-4

Also known as: ACETATE DE 3-METHOXYBUTYLE, 1-BUTANOL, 3-METHOXYACETATE, BUTOXYL

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 1809-19-4

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	960 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	146.19
Density of gas (kg/m ³)	6.51
Boiling Point (°C)	135
Flash Point (°C)	77

Behaviour at sea

Additional data

Colour	colourless
Odour	acrid

Transportation data

Cargo group	34
Family name	esters

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥1 and <2
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Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	F - Floating substance, not likely to evaporate or to dissolve quickly
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

Ecotoxicity

3-METHYLPYRIDINE

UN Number: 2313 - CAS Number: 108-99-6

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2313
CAS number	108-99-6

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	957 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	93.13
Boiling Point (°C)	144
Melting Point (°C)	-18.3
Vapour Pressure (Pa)	586 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	538
Flash Point (°C)	36
Lower explosivity limit (LEL) (volume %)	1.3
Upper explosivity limit (UEL) (volume %)	8.7

Behaviour at sea

Additional data

Colour	colourless
Odour	sweetish, not unpleasant

Transportation data

Transport mode	Bulk, Packaged
Package group	III
State	liquid
Temperature (°C)	ambient
Family name	aromatic amines
IMO class	3.3

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	3 - Corrosive
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TEEL-1 (mg/m3)	5 ppm
TEEL-2 (mg/m3)	125 ppm
TEEL-3 (mg/m3)	600 ppm

Ecotoxicity

4-METHYLPYRIDINE

UN Number: 2313 - CAS Number: 108-89-4

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2313
CAS number	108-89-4

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	957 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	93.13
Density of gas (kg/m ³)	4.13
Boiling Point (°C)	145
Melting Point (°C)	2.4
Vapour Pressure (Pa)	530 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	538
Flash Point (°C)	57
Lower explosivity limit (LEL) (volume %)	1.3
Upper explosivity limit (UEL) (volume %)	8.7

Behaviour at sea

Additional data

Colour	colourless to brown
Odour	sweetish, obnoxious

Transportation data

Transport mode	Bulk, Packaged
Package group	III
State	liquid
Temperature (°C)	ambient
Family name	aromatic amines
IMO class	3.3

Reactivity data

Water	No
Acid(s)	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	3 - Corrosive
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

Ecotoxicity

ACETALDEHYDE

UN Number: 1089

Also known as: ACETIC ALDEHYDE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1089

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	780 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	44.05
Density of gas (kg/m ³)	1.032
Boiling Point (°C)	20.6
Melting Point (°C)	-123
Vapour Pressure (Pa)	99900 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	185
Flash Point (°C)	-38
Upper explosivity limit (UEL) (volume %)	57

Behaviour at sea

Additional data

Colour	colourless
Odour	sharp, fruit odour
Standard behavior classification	DE

Transportation data

Transport mode	Gas, Packaged
Ship type	2G, 2PG
Cargo group	19
State	liquid
Temperature (°C)	ambient

Pressure (Pa)	safety relief
Family name	aldehydes
IMO class	3.1

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	No
Static electricity	Yes
Oxidizing agents	Yes
Reducing agents	Yes
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

IDHL	10000
TLV-TWA	100
ERPG-1 (ppm)	10
ERPG-2 (ppm)	200
ERPG-3 (ppm)	1000

Ecotoxicity

ACETIC ACID (>80 wt% acid)

UN Number: 2789 - CAS Number: 64-19-7

Also known as: ACIDE ACETIQUE (teneur en acide >80% mass.), AZINZUUR, Ethanoic Acid, Ethylic Acid, Methanecarboxylic Acid, Vinegar, Vinegar Acid, Acetic Acid, Acide Acetique

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2789
CAS number	64-19-7
Formula	C ₂ H ₄ O ₂

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	1051 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	1.16 [cSt] at a temperature of 20°C 1 [cSt] at a temperature of 25°C
Molar mass (g/mol)	60.05
Density of gas (kg/m ³)	2.709
Solubility (g/L)	1050000 [g/L] at a temperature of 20°C and salinity of 0‰ 1050000 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	118.1
Melting Point (°C)	17
Critical molar volume (m ³ /mol)	0.000171
Critical temperature (°C)	590.7
Critical pressure (Pa)	5780000
Surface tension (mN/m)	27.59 [mN/m] at a temperature of 20°C 27.1 [mN/m] at a temperature of 25°C
Vapour Pressure (Pa)	1599 [Pa] at a temperature of 20°C 2093 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	485
Flash Point (°C)	40
Flash Point (Pensky-Martens closed cup) (°C)	39.4
Flash Point (Cleveland open cup) (°C)	44.4

Lower explosivity limit (LEL) (volume %)	5.4
Upper explosivity limit (UEL) (volume %)	16
Vapor enthalpy (J/Kg)	394670 [J/Kg] at a temperature of 117.9°C 389010 [J/Kg] at a temperature of 25°C
Combust enthalpy (J/Kg)	13100000
Specific heat capacity (J/(Kg·K))	2053
Combustion efficiency (%)	98
Mass flow rate of the combustion surface (Kg/(m ² ·s))	0.03
Rad fraction (%)	23
Henry's constant (mol/(m ³ ·Pa))	0.01

Behaviour at sea

Log kow	0.17
Log koc	1.02
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Biodegradation in marine environment (Half-life) (days)	10
Bioconcentration factor (BCF)	1

Additional data

Colour	colourless				
Odour	strong vinegar odour				
MARPOL pollution category	<table border="1"> <thead> <tr> <th>Category</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Z</td> <td>Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment.</td> </tr> </tbody> </table>	Category	Description	Z	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment.
Category	Description				
Z	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment.				

Transportation data

Transport mode	Bulk, Packaged
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	organic acids

Reactivity data

Water	No
Abilities	Miscible in water.
Acid(s)	Yes
Base(s)	Yes

Metal(s) and alloys	Yes
Oxidizing agents	No
Organic substance	Yes
Notable risks	Reacts violently with strong oxidants and strong bases.

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



IDHL	1000
Hazard statements	Physical
	H226 Flammable liquid and vapour.
	Health
	H314 Causes severe skin burns and eye damage.

Precautionary statements	Prevention	
	P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
	P241	Use explosion-proof electrical/ventilating/lighting/.../equipment.
	P260	Do not breathe dust/fume/gas/mist/vapours/spray.
	P280	Wear protective gloves/protective clothing/eye protection/face protection.
	Response	
	P303 + P361 + P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
	P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	Disposal	
	P501	Dispose of contents/container to ...

TLV-TWA	10
ERPG-2 (ppm)	35
ERPG-3 (ppm)	250

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	20
Lowest median lethal concentration (LC50) on crustacean (mg/l)	18.9
Lowest median lethal concentration (LC50) on fishes (mg/l)	43.8
Highest no observed effect concentration (NOEC) on algae (mg/l)	10.6
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	22.7
Highest no observed effect concentration (NOEC) on fishes (mg/l)	34.3
Assessment factor (AF)	100 on the short term 100 on the long term
Predicted No Effect Concentration (PNEC) (µg/l)	189 [µg/l] on the short term 106 [µg/l] on the long term

ACETIC ANHYDRIDE

UN Number: 1715 - CAS Number: 108-24-7

Also known as: ACETIC ACID ANHYDRIDE, ACETIC OXIDE, ACETYL, ACETYL ANHYDRIDE, ACETYL ETHER, ACETYL OXIDE, ANHYDRIDE ACETIQUE, AZINZUUR ANHYDRIDE, Acetanhydride, Ethanoic Anhydrate, Ethanoic Anhydride, Ethanoic Acid Anhydride, Acetic Anhydride, Anhydride Acetique

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1715
CAS number	108-24-7
Formula	C ₄ H ₆ O ₃

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	1080 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	0.84 [cSt] at a temperature of 20°C 0.78 [cSt] at a temperature of 25°C
Molar mass (g/mol)	102.09
Density of gas (kg/m ³)	4.541
Solubility (g/L)	113500 [g/L] at a temperature of 20°C and salinity of 0‰ 262000 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	139
Melting Point (°C)	-73
Critical temperature (°C)	606
Critical pressure (Pa)	4000000
Surface tension (mN/m)	32.7 [mN/m] at a temperature of 20°C 31.93 [mN/m] at a temperature of 25°C
Vapour Pressure (Pa)	533 [Pa] at a temperature of 20°C 680 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	330
Flash Point (°C)	49
Flash Point (Pensky-Martens closed cup) (°C)	49
Flash Point (Cleveland open cup) (°C)	54

Lower explosivity limit (LEL) (volume %)	2.7
Upper explosivity limit (UEL) (volume %)	10
Combustion enthalpy (J/Kg)	16400000
Specific heat capacity (J/(Kg·K))	1648
Combustion efficiency (%)	98
Mass flow rate of the combustion surface (Kg/(m ² ·s))	0.03
Rad fraction (%)	23
Henry's constant (mol/(m ³ ·Pa))	0.57

Behaviour at sea

Log kow	-0.58
Log koc	1.11
Biodegradation in estuary environment (Half-life) (days)	1
Biodegradation in marine environment (Half-life) (days)	10
Bioconcentration factor (BCF)	1

Additional data

Colour	colourless				
Odour	strong vinegar odour				
MARPOL pollution category	<table border="1"> <thead> <tr> <th>Category</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Z</td> <td>Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment.</td> </tr> </tbody> </table>	Category	Description	Z	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment.
Category	Description				
Z	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment.				

Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	11
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	under pressure
Family name	organic anhydrides

Reactivity data

Water	Yes
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	Yes
Oxidizing agents	Yes

Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - $e < 1$, or $> ca. 7$, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	3 - Corrosive
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Specific Health Concern (D3)	A - Aspiration
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



IDHL	1000
Hazard statements	Physical
	H226 Flammable liquid and vapour.
	Health
	H302 Harmful if swallowed.
	H314 Causes severe skin burns and eye damage.
	H332 Harmful if inhaled.

Precautionary statements**Prevention**

- P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
- P233 Keep container tightly closed.
- P235 Keep cool.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting/.../equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P260 Do not breathe dust/fume/gas/mist/vapours/spray.
- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
- P264 Wash ... thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P271 Use only outdoors or in a well-ventilated area.
- P284 Wear respiratory protection.

Response

- P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
- P303 IF ON SKIN (or hair):
- P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P310 Immediately call a POISON CENTER or doctor/physician.
- P320 Specific treatment is urgent (see ... on this label).
- P330 Rinse mouth.
- P370 In case of fire:
- P378 Use ... for extinction.

Storage

- P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
- P405 Store locked up.

Disposal

- P501 Dispose of contents/container to ...

ERPG-1 (ppm) 0.5

ERPG-2 (ppm) 15

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	9
Lowest median lethal concentration (LC50) on crustacean (mg/l)	55
Lowest median lethal concentration (LC50) on fishes (mg/l)	265
Highest no observed effect concentration (NOEC) on algae (mg/l)	9
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	31.4
Highest no observed effect concentration (NOEC) on fishes (mg/l)	34.3
Assessment factor (AF)	1000 on the short term 1000 on the long term
Predicted No Effect Concentration (PNEC) (µg/l)	9 [µg/l] on the short term 9 [µg/l] on the long term

ACETOCHLOR

CAS Number: 34256-82-1

Also known as: ACETOCHLORE, 2-CHLORO-N-ETHOXYMETHYL-N-(2-ETHYL-6-METHYLPHENYL)ACETAMIDE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 34256-82-1

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m³)	1117 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	270
Density of gas (kg/m³)	> 1.29
Boiling Point (°C)	162 (933 Pa)
Melting Point (°C)	< 0
Vapour Pressure (Pa)	0.002 [Pa] at a temperature of 20°C
Flash Point (°C)	> 100

Behaviour at sea

Additional data

Colour	light amber to violet
Odour	sweet
Standard behavior classification	SD

Transportation data

State liquid

Reactivity data

Metal(s) and alloys Yes (Cu, mild steel)

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	3 - ≥ 3 and < 4
Bioaccumulation in BCF (A1B)	2 - ≥ 10 and < 100
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Eye irritation/corrosivity (D2)	0 - Not irritating
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

ACETONE

UN Number: 1090 - CAS Number: 67-64-1

Also known as: DIMETHYL FORMALDEHYDE, DIMETHYL KETAL, DIMETHYL KETONE, Dimethylketal, Ketone Propane, Beta-Ketopropane, Methyl Ketone, 2-Propanone, Pyroacetic Acid, Pyroacetic Ether, Propanone, Acetone

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1090
CAS number	67-64-1
Formula	C ₃ H ₆ O

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	791 [Kg/m ³] at a temperature of 20°C 807 [Kg/m ³] at a temperature of 5°C 801.8 [Kg/m ³] at a temperature of 10°C 791.8 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	0.4 [cSt] at a temperature of 20°C 0.39 [cSt] at a temperature of 25°C 1.5861 [cSt] at a temperature of 5°C 1.4467 [cSt] at a temperature of 10°C 1.7176 [cSt] at a temperature of 20°C
Molar mass (g/mol)	58.08
Density of gas (kg/m ³)	2.58
Solubility (g/L)	790000 [g/L] at a temperature of 20°C and salinity of 0‰ 790000 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	56
Melting Point (°C)	-95
Critical molar volume (m ³ /mol)	0.000213
Critical temperature (°C)	508.1
Critical pressure (Pa)	4700000

Surface tension (mN/m)	23.7 [mN/m] at a temperature of 20°C
	23.46 [mN/m] at a temperature of 25°C
	24.9 [mN/m] at a temperature of 5.1°C
	21.14 [mN/m] at a temperature of 9.8°C
	23.44 [mN/m] at a temperature of 18°C
Vapour Pressure (Pa)	22599 [Pa] at a temperature of 20°C
	30930 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	540
Flash Point (°C)	-19
Flash Point (Pensky-Martens closed cup) (°C)	-20
Flash Point (Cleveland open cup) (°C)	-15.6
Lower explosivity limit (LEL) (volume %)	2.5
Upper explosivity limit (UEL) (volume %)	12.8
Vapor enthalpy (J/Kg)	501033 [J/Kg] at a temperature of 56.2°C
	533574 [J/Kg] at a temperature of 25°C
Combust enthalpy (J/Kg)	28600000
Specific heat capacity (J/(Kg·K))	2174.59
Combustion efficiency (%)	96
Mass flow rate of the combustion surface (Kg/(m²·s))	0.05
Rad fraction (%)	27
Henry's constant (mol/(m³·Pa))	4.31

Behaviour at sea

Log kow	-0.24
Log koc	0.73
Aqueous photolysis (Half-life)	1.67
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Biodegradation in marine environment (Half-life) (days)	10
Bioconcentration factor (BCF)	0.69

Additional data

Colour	colourless
Odour	sweet odour
MARPOL pollution category	Category
	Description
	Z
	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment.
Standard behavior classification	DE

Transportation data

Package group	II
Cargo group	18
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	ketones
IMO class	3.1

Reactivity data

Water	No
Abilities	Miscible in water.
Acid(s)	Yes
Base(s)	Yes
Static electricity	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - $e < 1$, or $> ca. 7$, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	DE - Dissolver/Evaporator
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold



IDHL	20000
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Hazard statements	Physical	
	H225	Highly flammable liquid and vapour.
	Health	
	H319	Causes serious eye irritation.
	H336	May cause drowsiness or dizziness.
TLV-TWA	750	
TEEL-1 (mg/m3)	200	
TEEL-2 (mg/m3)	3200	
TEEL-3 (mg/m3)	5700	

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	> 10000
Lowest median lethal concentration (LC50) on crustacean (mg/l)	2100
Lowest median lethal concentration (LC50) on fishes (mg/l)	6070
Highest no observed effect concentration (NOEC) on algae (mg/l)	3400
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	1660
Assessment factor (AF)	1000 on the short term 500 on the long term
Predicted No Effect Concentration (PNEC) (µg/l)	2100 [µg/l] on the short term 3320 [µg/l] on the long term

ACETONE CYANOHYDRIN stabilized

UN Number: 1541 - CAS Number: 75-86-5

Also known as: CYANHYDRINE D'ACETONE stabilisé, 2-Hydroxy-2-Methylpropanenitrile, 2-Hydroxy-2-Methylpropionitrile, Acetonecyanhydrine, Cyanhydrine D'Acetone, 2-Methylacetonitrile, 2-Cyano-2-Propanol, 2-Hydroxyisobutyronitrile, Alpha-Hydroxyisobutyronitrile, Acetone Cyanohydrin, Acetone Cyanohydrine, α -Hydroxyisobutyronitrile

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1541
CAS number	75-86-5
Formula	C ₄ H ₇ NO

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	925 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	85.11
Density of gas (kg/m ³)	3.741
Solubility (g/L)	930000 [g/L] at a temperature of 20°C and salinity of 0‰ 930000 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	82
Melting Point (°C)	-20
Vapour Pressure (Pa)	110 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	685
Flash Point (°C)	74
Flash Point (Pensky-Martens closed cup) (°C)	73.9
Flash Point (Cleveland open cup) (°C)	74
Lower explosivity limit (LEL) (volume %)	2.25
Upper explosivity limit (UEL) (volume %)	11
Combustion enthalpy (J/Kg)	26300000
Combustion efficiency (%)	95
Mass flow rate of the combustion surface (Kg/(m ² ·s))	0.03
Rad fraction (%)	22
Henry's constant (mol/(m ³ ·Pa))	0.34

Behaviour at sea

Log kow	-0.03
Log koc	1.08
Biodegradation in estuary environment (Half-life) (days)	1
Bioconcentration factor (BCF)	1

Additional data

Colour	colourless				
Odour	mild almond odour				
MARPOL pollution category	<table><thead><tr><th>Category</th><th>Description</th></tr></thead><tbody><tr><td>Y</td><td>Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.</td></tr></tbody></table>	Category	Description	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.
Category	Description				
Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.				

Transportation data

Transport mode	Bulk, Packaged
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	under pressure
IMO class	6.1

Reactivity data

Abilities	Miscible in water.
Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	3 - Moderately high
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	4 - High

Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



IDHL	45 (as CN)	
Hazard statements	Health	
	H300	Fatal if swallowed.
	H310	Fatal in contact with skin.
	H330	Fatal if inhaled.
	H370	Causes damage to organs.
	Environmental	
	H400	Very toxic to aquatic life.
	H410	Very toxic to aquatic life with long lasting effects.
Precautionary statements	Prevention	
	P280	Wear protective gloves/protective clothing/eye protection/face protection.
	P284	Wear respiratory protection.
	Response	
	P302 + P350	IF ON SKIN: Gently wash with plenty of soap and water.
	Storage	
	P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
	Disposal	
	P501	Dispose of contents/container to ...
	TLV-TWA	4.5 (CN)
TEEL-2 (mg/m3)	7.1	
TEEL-3 (mg/m3)	15	

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	1.25
Lowest median lethal concentration (LC50) on crustacean (mg/l)	0.13
Lowest median lethal concentration (LC50) on fishes (mg/l)	0.22
Assessment factor (AF)	1000 on the short term
	10000 on the long term

Predicted No Effect Concentration (PNEC) ($\mu\text{g/l}$)

0.13 [$\mu\text{g/l}$] on the short term

0.013 [$\mu\text{g/l}$] on the long term

ACETONITRILE

UN Number: 1648 - CAS Number: 75-05-8

Also known as: CYANOMETHANE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1648
CAS number	75-05-8

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	787 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	41.05
Density of gas (kg/m ³)	1.83
Boiling Point (°C)	81
Melting Point (°C)	-45
Vapour Pressure (Pa)	11143 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	525
Lower explosivity limit (LEL) (volume %)	4.4
Upper explosivity limit (UEL) (volume %)	16

Behaviour at sea

Additional data

Colour	colourless
Odour	sweet odour
Standard behavior classification	DE

Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	37
State	liquid

Temperature (°C)	ambient
Pressure (Pa)	under pressure
Family name	nitriles
IMO class	3.2

Reactivity data

Acid(s)	Yes
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GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

IDHL	4000
TLV-TWA	40
TEEL-1 (mg/m3)	13
TEEL-2 (mg/m3)	320
TEEL-3 (mg/m3)	670

Ecotoxicity

ACETOPHENONE

Also known as: ACETYL BENZENE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1028 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	120.15
Boiling Point (°C)	201.9
Melting Point (°C)	20
Vapour Pressure (Pa)	140 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	571
Flash Point (°C)	999

Behaviour at sea

Additional data

Colour	colourless
Odour	sweet, flower odour

Transportation data

State	liquid
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Reactivity data

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m ³)	30
TEEL-2 (mg/m ³)	50
TEEL-3 (mg/m ³)	350

Ecotoxicity

ACETYL CHLORIDE

UN Number: 1717

Also known as: ACETIC ACID CHLORIDE, ACETIC CHLORIDE, CHLORURE D'ACETYLE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1717

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1103.9 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	78.5
Density of gas (kg/m ³)	3.483
Boiling Point (°C)	51
Melting Point (°C)	-112
Vapour Pressure (Pa)	28000 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	390
Flash Point (°C)	-4
Lower explosivity limit (LEL) (volume %)	7.3
Upper explosivity limit (UEL) (volume %)	19

Behaviour at sea

Additional data

Colour	colourless
Odour	sharp odour
Standard behavior classification	DE, SD

Transportation data

Package group	II
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	under pressure

IMO class	3.2
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Reactivity data

Water	Yes
Acid(s)	No
Base(s)	No
Metal(s) and alloys	Yes
Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m3)	0.0075
TEEL-2 (mg/m3)	0.05
TEEL-3 (mg/m3)	125

Ecotoxicity

ACROLEIN inhibited

UN Number: 1092

Also known as: ACRALDEHYDE, ACROLEINE, ALLYL ALDEHYDE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1092

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	843 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	56.1
Density of gas (kg/m ³)	2.451
Boiling Point (°C)	53
Melting Point (°C)	-88
Vapour Pressure (Pa)	29681 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	278
Flash Point (°C)	-20
Lower explosivity limit (LEL) (volume %)	2.8
Upper explosivity limit (UEL) (volume %)	31

Behaviour at sea

Additional data

Colour	colourless to light yellow
Odour	sharp, irritating odour
Standard behavior classification	DE

Transportation data

Cargo group	19
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	under pressure

Family name	aldehydes
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IMO class	6.1
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Reactivity data

Water	No
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Acid(s)	Yes
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Base(s)	Yes
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Metal(s) and alloys	No
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Oxidizing agents	Yes
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Reducing agents	No
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Combustibles	No
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Organic substance	No
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GESAMP Hazard profile

Human toxicity threshold

TLV-TWA	0.1
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ERPG-1 (ppm)	0.05
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ERPG-2 (ppm)	0.15
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ERPG-3 (ppm)	1.5
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Ecotoxicity

ACRYLAMIDE

UN Number: 2074 - CAS Number: 79-06-1

Also known as: ACRYLIC AMIDE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2074
CAS number	79-06-1

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1050 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	71
Density of gas (kg/m ³)	1.29
Melting Point (°C)	84
Vapour Pressure (Pa)	2527 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	424
Flash Point (°C)	999

Behaviour at sea

Additional data

Transportation data

Transport mode	Bulk, Packaged
Package group	III
IMO class	6.1

Reactivity data

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
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Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TLV-TWA	0.01
TEEL-1 (mg/m3)	7.5
TEEL-2 (mg/m3)	60
TEEL-3 (mg/m3)	60

Ecotoxicity

ACRYLIC ACID inhibited

UN Number: 2218 - CAS Number: 79-10-7

Also known as: ACIDE ACRYLIQUE, ACROLEIC ACID, Acrylic Acid, Inhibited, Ethylenecarboxylic Acid, Glacial Acrylic Acid, Propene Acid, 2-Propenoic Acid, Propenoic Acid, Vinylformic Acid, Acrylic Acid

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2218
CAS number	79-10-7
Formula	C ₃ H ₄ O ₂

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	1049.7 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	1.24 [cSt] at a temperature of 20°C
Molar mass (g/mol)	72.06
Density of gas (kg/m ³)	3.225
Solubility (g/L)	1060000 [g/L] at a temperature of 20°C and salinity of 0‰ 1060000 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	141.5
Melting Point (°C)	13
Surface tension (mN/m)	28.1 [mN/m] at a temperature of 25°C
Vapour Pressure (Pa)	1399 [Pa] at a temperature of 20°C 530 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	374
Flash Point (°C)	47
Flash Point (Pensky-Martens closed cup) (°C)	48
Flash Point (Cleveland open cup) (°C)	50
Lower explosivity limit (LEL) (volume %)	5.3
Upper explosivity limit (UEL) (volume %)	26
Combustion enthalpy (J/Kg)	18400000
Specific heat capacity (J/(Kg·K))	2021.9
Combustion efficiency (%)	98

Mass flow rate of the combustion surface (Kg/(m ² ·s))	0.03
Rad fraction (%)	23
Henry's constant (mol/(m ³ ·Pa))	0.04

Behaviour at sea

Log kow	0.39
Log koc	1.42
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Biodegradation in marine environment (Half-life) (days)	10
Bioconcentration factor (BCF)	1

Additional data

Colour	colourless
Odour	irritating odour

MARPOL pollution category	Category	Description
	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.

Transportation data

Transport mode	Bulk, Packaged
Package group	II
State	liquid
Temperature (°C)	16❖- 24❖
Family name	organic acid

Reactivity data

Water	No
Abilities	Miscible in water.
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	No
Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



Hazard statements	Physical	
	H226	Flammable liquid and vapour.
	Health	
	H302	Harmful if swallowed.
	H312	Harmful in contact with skin.
	H332	Harmful if inhaled.
	H335	May cause respiratory irritation.
	Environmental	
	H400	Very toxic to aquatic life.
	Precautionary statements	Prevention
P210		Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P261		Avoid breathing dust/fume/gas/mist/vapours/spray.
P273		Avoid release to the environment.
Response		
P303 + P361 + P353		IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305 + P351 + P338		IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
TLV-TWA		10
ERPG-2 (ppm)		50
ERPG-3 (ppm)		750

Ecotoxicity

ECOTOXICITY

Lowest median lethal concentration (LC50) on algae (mg/l)	0.13
Lowest median lethal concentration (LC50) on crustacean (mg/l)	47
Lowest median lethal concentration (LC50) on fishes (mg/l)	27
Highest no observed effect concentration (NOEC) on algae (mg/l)	0.03
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	7
Assessment factor (AF)	100 on the short term 100 on the long term
Predicted No Effect Concentration (PNEC) (µg/l)	1.3 [µg/l] on the short term 0.3 [µg/l] on the long term

ACRYLONITRILE inhibited

UN Number: 1093 - CAS Number: 107-13-1

Also known as: ACRYLON, CARBACRYL, CYANOETHYLENE, Acrylonitrile Monomer, 2-Propenenitrile, Propenoic Acid Nitrile, Vinyl Cyanide, Cyanure De Vinyle, Nitrile Acrylique, Acrylonitrile

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1093
CAS number	107-13-1
Formula	C ₃ H ₃ N

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	807.5 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	0.43 [cSt] at a temperature of 20°C 0.42 [cSt] at a temperature of 25°C
Molar mass (g/mol)	53.06
Density of gas (kg/m ³)	2.322
Solubility (g/L)	79000 [g/L] at a temperature of 20°C and salinity of 0‰
Boiling Point (°C)	77
Melting Point (°C)	-82
Critical molar volume (m ³ /mol)	0.000173
Critical temperature (°C)	540
Critical pressure (Pa)	4660000
Surface tension (mN/m)	27.22 [mN/m] at a temperature of 20°C 26.63 [mN/m] at a temperature of 25°C
Vapour Pressure (Pa)	11143 [Pa] at a temperature of 20°C 14470 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	480
Flash Point (°C)	-5
Flash Point (Pensky-Martens closed cup) (°C)	-1
Lower explosivity limit (LEL) (volume %)	3
Upper explosivity limit (UEL) (volume %)	17

Vapor enthalpy (J/Kg)	616000 [J/Kg] at a temperature of 77.4°C
Combust enthalpy (J/Kg)	31900000
Specific heat capacity (J/(Kg·K))	2050
Combustion efficiency (%)	98
Mass flow rate of the combustion surface (Kg/(m ² ·s))	0.05
Rad fraction (%)	26
Henry's constant (mol/(m ³ ·Pa))	8.7

Behaviour at sea

Log kow	-0.92
Log koc	-0.07
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Biodegradation in marine environment (Half-life) (days)	Not biodegradable
Bioconcentration factor (BCF)	1

Additional data

Colour	colourless to light yellow
Odour	irritating odour

MARPOL pollution category	Category	Description
	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.

Standard behavior classification	DE
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Transportation data

Transport mode	Bulk, Packaged
Cargo group	15
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	under pressure
Family name	substituted allyls
IMO class	3.2

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes

Static electricity	No
Oxidizing agents	Yes
Notable risks	Oxidizer. Polymerization.

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	2 - ≥10 and <100
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	3 - Moderately high
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	DE - Dissolver/Evaporator
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



IDHL	500	
Hazard statements	Physical	
	H225	Highly flammable liquid and vapour.
	Health	
	H301	Toxic if swallowed.
	H311	Toxic in contact with skin.
	H317	May cause an allergic skin reaction.
	H318	Causes serious eye damage.
	H331	Toxic if inhaled.
	H335	May cause respiratory irritation.
	H350	May cause cancer.
	Environmental	
	H411	Toxic to aquatic life with long lasting effects.

Precautionary statements	Prevention
	P201 Obtain special instructions before use.
	P202 Do not handle until all safety precautions have been read and understood.
	P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
	P231 Handle under inert gas.
	P242 Use only non-sparking tools.
	P243 Take precautionary measures against static discharge.
	P260 Do not breathe dust/fume/gas/mist/vapours/spray.
	P262 Do not get in eyes, on skin, or on clothing.
	P270 Do not eat, drink or smoke when using this product.
	P272 Contaminated work clothing should not be allowed out of the workplace.
	P273 Avoid release to the environment.
	P280 Wear protective gloves/protective clothing/eye protection/face protection.
	P284 Wear respiratory protection.
	Response
	P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
	P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
	P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
	P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P331 Do NOT induce vomiting.
	P370 + P378 In case of fire: Use ... for extinction.
	Storage
	P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
	P405 Store locked up.
	Disposal
	P501 Dispose of contents/container to ...

ERPG-1 (ppm)	10
ERPG-2 (ppm)	35
ERPG-3 (ppm)	75

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	1.63
Lowest median lethal concentration (LC50) on crustacean (mg/l)	6
Lowest median lethal concentration (LC50) on fishes (mg/l)	5.16
Highest no observed effect concentration (NOEC) on algae (mg/l)	0.8

Highest no observed effect concentration (NOEC) on crustacean (mg/l)	0.5
Highest no observed effect concentration (NOEC) on fishes (mg/l)	0.17
Assessment factor (AF)	100 on the short term 100 on the long term
Predicted No Effect Concentration (PNEC) (µg/l)	16.3 [µg/l] on the short term 1.7 [µg/l] on the long term

ACRYLONITRILE-STYRENE COPOLYMER dispersion in polyether polyol

Also known as: COPOLYMERE D'ACRYLONITRILE-STYRENE dispersion dans polyether polyol

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1050 [Kg/m ³] at a temperature of 20°C
Boiling Point (°C)	decomp.
Melting Point (°C)	< -25
Vapour Pressure (Pa)	6665 [Pa] at a temperature of 20°C
Flash Point (°C)	182

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless

Transportation data

State	liquid
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Reactivity data

GESAMP Hazard profile

Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible

Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Eye irritation/corrosivity (D2)	0 - Not irritating
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly
Effects on wildlife and bottom habitats (E3)	0 - Is not a floater; and does not pose any known health hazards

Human toxicity threshold

Ecotoxicity

ADIPONITRILE

UN Number: 2205 - CAS Number: 111-69-3

Also known as: ADIPIC ACID, ADIPIC ACID DINITRILE, 1,4-CYANOBTANE, 1,4-DICYANOBTANE, DINITRILE, Hexanedinitrile, Hexanedioic Acid Nitrile, Adipynitrile, Tetramethylenedicyanide, Adiponitrile

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2205
CAS number	111-69-3
Formula	C ₆ H ₈ N ₂

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	961.1 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	9.4 [cSt] at a temperature of 20°C
Molar mass (g/mol)	108
Density of gas (kg/m ³)	4.77
Solubility (g/L)	83000 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	290
Melting Point (°C)	1
Critical temperature (°C)	507
Critical pressure (Pa)	2800000
Surface tension (mN/m)	45.45 [mN/m] at a temperature of 25°C
Vapour Pressure (Pa)	10 [Pa] at a temperature of 20°C 0.33 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	460
Flash Point (°C)	93
Flash Point (Cleveland open cup) (°C)	93
Lower explosivity limit (LEL) (volume %)	1.7
Upper explosivity limit (UEL) (volume %)	4.9
Vapor enthalpy (J/Kg)	703382 [J/Kg] at a temperature of 25°C
Combustion enthalpy (J/Kg)	40400000
Specific heat capacity (J/(Kg·K))	1190

Henry's constant (mol/(m ³ ·Pa))	0.00012
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Behaviour at sea

Persistence (days)	1.6
Log k _{ow}	-0.32
Log k _{oc}	1.3
Bioconcentration factor (BCF)	3

Additional data

Colour	colourless to light yellow	
Odour	odourless	
MARPOL pollution category	Category	Description
	Z	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment.
Standard behavior classification	FD	

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	37
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	under pressure
Family name	nitriles
IMO class	6.1

Reactivity data

Acid(s)	Yes
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GESAMP Hazard profile

Bioaccumulation in logP _{ow} (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	3 - Moderately high
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	3 - Moderately high
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high

Skin irritation/corrosivity (D1)	3 - Corrosive
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	FD - Floater/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



Hazard statements	Health	
	H301	Toxic if swallowed.
	H332	Harmful if inhaled.
Precautionary statements	Prevention	
	P233	Keep container tightly closed.
	P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
	Response	
	P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
	P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
	P330	Rinse mouth.
	Storage	
	P403	Store in a well-ventilated place.
	TLV-TWA	50
TEEL-1 (mg/m3)	3.85	
TEEL-2 (mg/m3)	3.85	
TEEL-3 (mg/m3)	150	

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	> 100
Lowest median lethal concentration (LC50) on crustacean (mg/l)	445
Lowest median lethal concentration (LC50) on fishes (mg/l)	384
Highest no observed effect concentration (NOEC) on algae (mg/l)	> 100
Highest no observed effect concentration (NOEC) on fishes (mg/l)	720
Assessment factor (AF)	1000 on the short term
Predicted No Effect Concentration (PNEC) (µg/l)	384 [µg/l] on the short term

ALACHLOR technical (90% or more)

CAS Number: 15972-60-8

Also known as: ALACHLORE technique (> 90%), 2-CHLORO-2',6'-DIETHYL-N-METHOXYMETHYLACETANILIDE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 15972-60-8

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m³)	1130 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	269.8
Boiling Point (°C)	100 (2.66 Pa)
Melting Point (°C)	38
Vapour Pressure (Pa)	< 10 [Pa] at a temperature of 20°C
Flash Point (°C)	137

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless

Transportation data

State solid

Reactivity data

Metal(s) and alloys Yes (steel, black iron)

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	3 - ≥3 and <4
Bioaccumulation in BCF (A1B)	3 - ≥100 and <500

Bioaccumulation (A1)	3 - Moderate potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	1 - Low
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Eye irritation/corrosivity (D2)	0 - Not irritating
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

Ecotoxicity

ALCOHOLIC BEVERAGES

UN Number: 3065

Also known as: AQUEOUS ETHANOLIC SOLUTIONS, BOISSONS ALCOOLISEES

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 3065

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	790 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	46.1
Boiling Point (°C)	78
Melting Point (°C)	0.974358974

Behaviour at sea

Additional data

Colour	miscellaneous
Odour	alcoholic odour

Transportation data

Package group	II
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	alcohols, glycols
IMO class	3.2

Reactivity data

Water	No
Acid(s)	No
Base(s)	No

Metal(s) and alloys	No
Oxidizing agents	Yes
Reducing agents	No

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	0 - Not irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	1 - Is a floater; and/or is slightly acutely toxic; and/or is mildly irritant to skin and/or eyes

Human toxicity threshold

Ecotoxicity

ALDRIN solid

UN Number: 2761

Also known as: ALDREX, ALDRINE solide, ALDRINE, ALDRITE, ALDROSOL, ALTOX, DRINOX

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 2761

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	1600 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	364.93
Melting Point (°C)	95
Vapour Pressure (Pa)	0.009 [Pa] at a temperature of 20°C
Flash Point (°C)	65

Behaviour at sea

Additional data

Colour	light to dark brown
Odour	mild chemical odour
Marine pollutant	P

Transportation data

Transport mode	Bulk, Packaged
Package group	II
State	solid
IMO class	6.1

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

TLV-TWA	0.015
TEEL-1 (mg/m3)	0.25
TEEL-2 (mg/m3)	10
TEEL-3 (mg/m3)	25

Ecotoxicity

ALKARYL POLYETHER (C9-C20)

Also known as: ALKARYL POLYETHERS (C9-C20)

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1100 [Kg/m ³] at a temperature of 20°C
Boiling Point (°C)	230/290
Melting Point (°C)	11.11111111
Vapour Pressure (Pa)	< 10000 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	260/370
Flash Point (°C)	150

Behaviour at sea

Additional data

Colour	yellow-brown
Odour	lub-oil odour
Standard behavior classification	S/SD

Transportation data

Cargo group	33
State	liquid
Family name	miscell. hydroc. mixt

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	No
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	4 - ≥ 4 and < 5
Bioaccumulation (A1)	4 - High potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

ALKYLBENZENESULFONIC ACID (>5% free H₂SO₄)

UN Number: 2584

Also known as: ACIDE ALKYL SULFONIQUE (H₂SO₄ libre >5%)

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 2584

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1200 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	310
Boiling Point (°C)	637
Melting Point (°C)	277
Vapour Pressure (Pa)	10100 [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Colour	white to yellow
Odour	odourless
Standard behavior classification	DE, D

Transportation data

Transport mode	Bulk, Packaged
Package group	II
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	Yes
Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	Yes

GESAMP Hazard profile

Human toxicity threshold

Ecotoxicity

ALKYLBENZENESULPHONIC ACID sodium salt solution

CAS Number: 42615-29-2

Also known as: ACIDE ALKYL BENZENESULFONIQUE sel de sodium, en solution, DECYLBENZENSULFONIC ACID

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 42615-29-2

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m³)	1000/1400 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	310 to 394
Boiling Point (°C)	decomp.
Flash Point (°C)	201

Behaviour at sea

Additional data

Colour	white to yellow
Odour	odourless

Transportation data

State	liquid
Temperature (°C)	ambient

Reactivity data

Water	No
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GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	3 - ≥3 and <4
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Bioaccumulation in BCF (A1B)	3 - ≥ 100 and < 500
Bioaccumulation (A1)	3 - Moderate potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	1 - Low
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	FD - Floater/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

Ecotoxicity

ALLYL ALCOHOL

UN Number: 1098 - CAS Number: 107-18-6

Also known as: ALCOOL ALLYLIQUE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1098
CAS number	107-18-6

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	852 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	58.08
Density of gas (kg/m ³)	2.58
Boiling Point (°C)	97.1
Melting Point (°C)	-129
Vapour Pressure (Pa)	2400 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	375
Flash Point (°C)	21
Lower explosivity limit (LEL) (volume %)	2.5
Upper explosivity limit (UEL) (volume %)	18

Behaviour at sea

Additional data

Colour	colourless
Odour	sharp, mustard odour

Transportation data

Transport mode	Bulk, Packaged
Cargo group	15
State	liquid
Temperature (°C)	ambient

Pressure (Pa)	under pressure
Family name	substituted allyls
IMO class	6.1

Reactivity data

Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	3 - Moderately high
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Specific Health Concern (D3)	A - Aspiration
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

IDHL	150
TEEL-1 (mg/m3)	2.1
TEEL-2 (mg/m3)	4.2
TEEL-3 (mg/m3)	20

Ecotoxicity

ALLYL CHLORIDE

UN Number: 1100 - CAS Number: 107-05-1

Also known as: CHLORALLYLENE, 3-CHLOROPROPENE, alpha-CHLOROPROPYLENE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1100
CAS number	107-05-1

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	938 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	76.53
Density of gas (kg/m ³)	3.354
Boiling Point (°C)	45
Melting Point (°C)	-136
Vapour Pressure (Pa)	40014 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	390
Flash Point (°C)	-30
Lower explosivity limit (LEL) (volume %)	3.3
Upper explosivity limit (UEL) (volume %)	11.9

Behaviour at sea

Additional data

Colour	colourless to yellow-brown
Odour	sharp, irritating odour

Transportation data

Transport mode	Bulk, Packaged
Cargo group	15
State	liquid
Temperature (°C)	ambient

Pressure (Pa)	under pressure
Family name	substituted allyls
IMO class	3.1

Reactivity data

Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation in BCF (A1B)	1 - ≥ 1 and < 10
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	E - Evaporator
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

IDHL	300
ERPG-2 (ppm)	40
ERPG-3 (ppm)	300

Ecotoxicity

alpha-PINENE

UN Number: 2368

Also known as: ACINTENE A

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 2368

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	860 [Kg/m ³] at a temperature of 20°C
Density of gas (kg/m ³)	6.089
Vapour Pressure (Pa)	665 [Pa] at a temperature of 20°C
Flash Point (°C)	33

Behaviour at sea

Persistence (days) 1.6

Additional data

Colour	colourless
Odour	turpentine odour
Standard behavior classification	D, FE, FED

Transportation data

Package group	III
State	liquid
IMO class	3.3

Reactivity data

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	4 - ≥ 4 and < 5
Bioaccumulation (A1)	4 - High potential to bioaccumulate

Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Specific Health Concern (D3)	Ss - Skin Sensitization
Interference with coastal amenities (E2)	F - Floating substance, not likely to evaporate or to dissolve quickly
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TEEL-1 (mg/m3)	0.0005
TEEL-2 (mg/m3)	0.0035
TEEL-3 (mg/m3)	0.015

Ecotoxicity

ALUMINIUM PHOSPHIDE

UN Number: 1397

Also known as: AIP, ALUMINIUM MONOPHOSPHIDE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1397

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	2850 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	57.96
Melting Point (°C)	> 1000

Behaviour at sea

Additional data

Colour	dark gray or dark yellow
Odour	fishy

Transportation data

State	solid
IMO class	4.3

Reactivity data

Water	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m ³)	0.907 ppm
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TEEL-2 (mg/m3)	2 ppm
TEEL-3 (mg/m3)	3.6 ppm

Ecotoxicity

ALUMINIUM SULFATE solution

Also known as: ALUMINIUM TRISULPHATE Solution, DIALUMINIUM SULPHATE Solution

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1270 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	342.1
Boiling Point (°C)	101
Melting Point (°C)	-15.6

Behaviour at sea

Additional data

Colour	white
Odour	odourless

Transportation data

Cargo group	43
State	liquid
Temperature (°C)	ambient
Family name	miscell. water solut.

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	Yes (carbon steel)
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Human toxicity threshold

Ecotoxicity

AMINOETHYLETHANOLAMINE

CAS Number: 111-41-1

Also known as: N-AMONOETHYLETHANOLAMINE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 111-41-1

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1028 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	104.15
Density of gas (kg/m ³)	4.644
Boiling Point (°C)	243
Ignition Temperature (°C)	368
Flash Point (°C)	135
Lower explosivity limit (LEL) (volume %)	15
Upper explosivity limit (UEL) (volume %)	27

Behaviour at sea

Additional data

Colour	colourless
Odour	mild ammonia odour

Transportation data

State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	alkanolamines

Reactivity data

Acid(s)	Yes
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Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - $e < 1$, or $> ca. 7$, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Skin irritation/corrosivity (D1)	3B - Corrosive
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TEEL-1 (mg/m3)	35
TEEL-2 (mg/m3)	250
TEEL-3 (mg/m3)	500

Ecotoxicity

AMMONIA anhydrous

UN Number: 1005 - CAS Number: 7664-41-7

Also known as: AMMONIAC anhydre, Ammonia Gas, Ammonia Anhydrous, Ammoniac

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1005
CAS number	7664-41-7
Formula	NH ₃

Physical chemical data

Physical State (20°C)	Gas
Physical State (25°C)	Gas
Density (kg/m ³)	0.75 [Kg/m ³] at a temperature of 20°C 681.8 [Kg/m ³] at a temperature of -33.33°C
Kinematic viscosity (cSt)	0.255 [cSt] at a temperature of -33.5°C
Molar mass (g/mol)	17.03
Density of gas (kg/m ³)	0.75
Solubility (g/L)	531000 [g/L] at a temperature of 20°C and salinity of 0‰ 440000 [g/L] at a temperature of 28°C and salinity of 0‰
Boiling Point (°C)	-33.2
Melting Point (°C)	-78
Critical molar volume (m ³ /mol)	6.98e-05
Critical temperature (°C)	405.56
Critical pressure (Pa)	1135700
Vapour Pressure (Pa)	861050 [Pa] at a temperature of 20°C 1013250 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	630
Flash Point (Pensky-Martens closed cup) (°C)	132
Lower explosivity limit (LEL) (volume %)	16
Upper explosivity limit (UEL) (volume %)	25
Vapor enthalpy (J/Kg)	1228334 [J/Kg] at a temperature of -33.33°C
Combustion enthalpy (J/Kg)	22476660
Henry's constant (mol/(m ³ ·Pa))	1.63

Behaviour at sea

Log kow	0.23
Log koc	1.155
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable

Additional data

Colour	colourless				
Odour	ammonia odour				
MARPOL pollution category	<table><thead><tr><th>Category</th><th>Description</th></tr></thead><tbody><tr><td>Other Substances</td><td>Substances which have been evaluated and found to fall outside Category X, Y or Z because they are considered to present no harm to marine resources, human health, amenities or other legitimate uses of the sea when discharged into the sea from tank cleaning of deballasting operations. The discharge of bilge or ballast water or other residues or mixtures containing these substances are not subject to any requirements of MARPOL Annex II.</td></tr></tbody></table>	Category	Description	Other Substances	Substances which have been evaluated and found to fall outside Category X, Y or Z because they are considered to present no harm to marine resources, human health, amenities or other legitimate uses of the sea when discharged into the sea from tank cleaning of deballasting operations. The discharge of bilge or ballast water or other residues or mixtures containing these substances are not subject to any requirements of MARPOL Annex II.
Category	Description				
Other Substances	Substances which have been evaluated and found to fall outside Category X, Y or Z because they are considered to present no harm to marine resources, human health, amenities or other legitimate uses of the sea when discharged into the sea from tank cleaning of deballasting operations. The discharge of bilge or ballast water or other residues or mixtures containing these substances are not subject to any requirements of MARPOL Annex II.				
Standard behavior classification	GD				

Transportation data

Transport mode	Gas, Packaged
Ship type	2G, 2PG
State	liq. compr. gas
Temperature (°C)	ambient
Pressure (Pa)	under pressure
Family name	ammonia
IMO class	2(2.3)

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	No
Static electricity	Yes
Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
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Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	2 - Moderate
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	DE - Dissolver/Evaporator
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



IDHL	500	
Hazard statements	Physical	
	H221	Flammable gas.
	H280	Contains gas under pressure, may explode if heated.
	Health	
	H314	Causes severe skin burns and eye damage.
	H331	Toxic if inhaled.
	Environmental	
H410	Very toxic to aquatic life with long lasting effects.	

Precautionary statements**Prevention**

- P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
- P260 Do not breathe dust/fume/gas/mist/vapours/spray.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response

- P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P377 Leaking gas fire: Do not extinguish, unless leak can be stopped safely.

Storage

- P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

TLV-TWA	25				
ERPG-1 (ppm)	25				
ERPG-2 (ppm)	150				
ERPG-3 (ppm)	750				
		10 min	30 min	60 min	4 hrs
AEGL-1 (ppm)	30	30	30	30	30
AEGL-2 (ppm)	220	220	160	110	110
AEGL-3 (ppm)	2700	1600	1100	550	390

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	17
Lowest median lethal concentration (LC50) on crustacean (mg/l)	0.13
Lowest median lethal concentration (LC50) on fishes (mg/l)	0.5
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	0.79
Assessment factor (AF)	20 on the short term
Predicted No Effect Concentration (PNEC) (µg/l)	1 [µg/l] on the short term

AMMONIA aqueous solution (28% or less)

UN Number: 2672 - CAS Number: 7664-41-7

Also known as: AMMONIA LIQUOR, AMMONIAQUE solution aqueuse (< 28%), AMMONIA WATER, AMMONIUM HYDROXIDE, AQUA AMMONIA, Ammonia Aqueous, Ammonia Solution, Ammonia Monohydrate, Ammonium Monohydrate, Aqueous Ammonia, Ammonium Hydroxide ((NH₄)(OH)), Ammonia, Aqueous Solution, Ammoniac Water, Ammonium Hydroxide (25%), Ammoniaque (25%)

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2672
CAS number	7664-41-7
Formula	NH ₅ O

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	900 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	35.05
Density of gas (kg/m ³)	0.77
Solubility (g/L)	305000 [g/L] at a temperature of 20°C and salinity of 0‰ 280000 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	36
Melting Point (°C)	-97
Surface tension (mN/m)	23.4 [mN/m] at a temperature of 20°C 18.1 [mN/m] at a temperature of 25°C
Vapour Pressure (Pa)	30000 [Pa] at a temperature of 20°C 47400 [Pa] at a temperature of 21.1°C
Ignition Temperature (°C)	> 600
Lower explosivity limit (LEL) (volume %)	16
Upper explosivity limit (UEL) (volume %)	25

Behaviour at sea

Log kow	-0.17
Log koc	1.16

Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Biodegradation in marine environment (Half-life) (days)	10

Additional data

Colour	colourless				
Odour	odourless				
MARPOL pollution category	<table border="1"> <thead> <tr> <th>Category</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Y</td> <td>Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.</td> </tr> </tbody> </table>	Category	Description	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.
Category	Description				
Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.				
Standard behavior classification	DE				

Transportation data

Transport mode	Bulk,Packaged
Package group	III
State	liquid
Family name	ammonia

Reactivity data

Water	No
Abilities	Solution.
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	Yes
Oxidizing agents	Yes
Combustibles	Yes
Organic substance	Yes
Notable risks	Reacts with oxides and peroxides.

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	2 - Moderate
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight

Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	DE - Dissolver/Evaporator
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



IDHL	300
Hazard statements	Health
	H314 Causes severe skin burns and eye damage.
	H335 May cause respiratory irritation.
	Environmental
H400 Very toxic to aquatic life.	
Precautionary statements	Prevention
	P260 Do not breathe dust/fume/gas/mist/vapours/spray.
	P280 Wear protective gloves/protective clothing/eye protection/face protection.
	Response
	P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
	P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P391 Collect spillage.
	Disposal
	P501 Dispose of contents/container to ...
	TLV-TWA
TEEL-1 (mg/m3)	6 ppm
TEEL-2 (mg/m3)	40 ppm
TEEL-3 (mg/m3)	100 ppm

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	1300
Lowest median lethal concentration (LC50) on crustacean (mg/l)	9
Lowest median lethal concentration (LC50) on fishes (mg/l)	2.4
Highest no observed effect concentration (NOEC) on algae (mg/l)	0.234
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	2

Highest no observed effect concentration (NOEC) on fishes (mg/l)	0.06
Assessment factor (AF)	1000 on the short term 100 on the long term
Predicted No Effect Concentration (PNEC) (µg/l)	2.4 [µg/l] on the short term 0.6 [µg/l] on the long term

AMMONIUM DIHYDROGENPHOSPHATE

Also known as: AMMONIUM DIHYDROGEN ORTHOPHOSPHATE, AMMONIUM PHOSPHATE, DIHYDROGENOPHOSPHATE D'AMMONIUM

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	1803 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	115.02
Melting Point (°C)	190/205

Behaviour at sea

Additional data

Transportation data

State solid

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

Ecotoxicity

AMMONIUM NITRATE (>0.2% combustible substances)

UN Number: 1942

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1942

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	1700 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	80.05
Melting Point (°C)	170

Behaviour at sea

Additional data

Colour	white to grey or brown
Odour	odourless

Transportation data

Transport mode	Bulk, Packaged
Package group	III
State	solid
Family name	organic acids
IMO class	5.1

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	No
Oxidizing agents	No

Reducing agents	No
Combustibles	No
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

TEEL-1 (mg/m3)	10
TEEL-2 (mg/m3)	10
TEEL-3 (mg/m3)	500

Ecotoxicity

AMMONIUM NITRATE solution (93% or less)

UN Number: 2426 - CAS Number: 6484-52-2

Also known as: Nitric Acid Ammonium Salt, Ammonium Nitrate, Ammonium Nitrate Solution (93% Or Less), Solutions De Nitrate D'Ammonium (93% Ou Moins)

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2426
CAS number	6484-52-2
Formula	NH ₄ NO ₃ (H ₂ O)

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	1720 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	80.1
Solubility (g/L)	10000000 [g/L] at a temperature of 20°C and salinity of 0‰
Boiling Point (°C)	390, decomp.
Melting Point (°C)	170
Vapour Pressure (Pa)	2000 [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless

MARPOL pollution category	Category	Description
	Z	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment.

Transportation data

Transport mode	Bulk, Packaged
IMO class	5.1

Reactivity data

Water	No
Abilities	Solution.
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	Yes
Oxidizing agents	Yes
Reducing agents	Yes
Combustibles	Yes

GESAMP Hazard profile

Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold



Hazard statements	Physical	
	H272	May intensify fire, oxidiser.
	Health	
	H319	Causes serious eye irritation.

Precautionary statements**Prevention**

- P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
- P220 Keep/Store away from clothing/.../combustible materials.
- P264 Wash ... thoroughly after handling.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response

- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P370 + P378 In case of fire: Use ... for extinction.

TEEL-1 (mg/m3)	10
TEEL-2 (mg/m3)	10
TEEL-3 (mg/m3)	500

Ecotoxicity

AMMONIUM POLYPHOSPHATE solution

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1400 [Kg/m ³] at a temperature of 20°C
Boiling Point (°C)	106
Vapour Pressure (Pa)	2000 [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Colour	green
Odour	odourless

Transportation data

Cargo group	43
State	liquid
Family name	miscell. water solut.

Reactivity data

Acid(s)	Yes
Metal(s) and alloys	Yes (Cu, Zn)
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible

Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	0 - Not irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	1 - Is a floater; and/or is slightly acutely toxic; and/or is mildly irritant to skin and/or eyes

Human toxicity threshold

Ecotoxicity

AMMONIUM SULPHATE solution

CAS Number: 7783-20-2

Also known as: DIAMMONIUM SULPHATE, DOLAMIN (TR)

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 7783-20-2

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	1200 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	132.14
Boiling Point (°C)	105

Behaviour at sea

Additional data

Colour	white
Odour	odourless

Transportation data

State	solid
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Reactivity data

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible

Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Eye irritation/corrosivity (D2)	0 - Not irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	0 - Is not a floater; and does not pose any known health hazards

Human toxicity threshold

Ecotoxicity

AMMONIUM SULPHIDE solution (45% or less)

UN Number: 2683 - CAS Number: 12124-99-1

Also known as: AMMONIUM HYDROGEN SULPHIDE SOLUTION, AMMONIUM MONOSULFIDE, AMMONIUM SULFHYDRATE, DIAMMONIUM SULPHIDE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2683
CAS number	12124-99-1

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	990/1010 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	68.14
Boiling Point (°C)	38/100
Melting Point (°C)	-18
Vapour Pressure (Pa)	2000 [Pa] at a temperature of 20°C
Flash Point (°C)	22
Upper explosivity limit (UEL) (volume %)	46

Behaviour at sea

Additional data

Colour	greenish to yellow
Odour	ammonia-like

Transportation data

Transport mode	Bulk, Packaged
Package group	II
State	liquid
Temperature (°C)	ambient

Reactivity data

Water	No
Acid(s)	Yes
Metal(s) and alloys	Yes (Cu, Zn)

GESAMP Hazard profile

Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

TEEL-1 (mg/m3)	10 ppm
TEEL-2 (mg/m3)	15 ppm
TEEL-3 (mg/m3)	15 ppm

Ecotoxicity

AMMONIUM THIOSULPHATE solution (60% or less)

CAS Number: 7783-18-8

Also known as: AMMONIUM HYPO SOLUTIONS, AMMONIUM HYPOSULPHITE, DIAMMONIUM THIOSULPHATE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 7783-18-8

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m³)	1340 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	148.2
Density of gas (kg/m³)	< 1.29
Boiling Point (°C)	99/104
Melting Point (°C)	-0.7
Vapour Pressure (Pa)	2000 [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Colour	colourless to pale green-yello
Odour	ammonia-like

Transportation data

Cargo group	43
State	liquid
Temperature (°C)	ambient
Family name	miscell. water solut.

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	1 - Is a floater; and/or is slightly acutely toxic; and/or is mildly irritant to skin and/or eyes

Human toxicity threshold

Ecotoxicity

AMYL ACETATES all isomers

UN Number: 1104 - CAS Number: 628-63-7

Also known as: ACETATES D'AMYLE mélange d'isomères, ACETIC ACID, n-AMYL ESTER, n-AMYLACETATE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1104
CAS number	628-63-7

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	876 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	130.19
Density of gas (kg/m ³)	5.805
Boiling Point (°C)	142/149
Melting Point (°C)	0.91025641
Vapour Pressure (Pa)	600 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	375/380
Flash Point (°C)	-0.276923077
Upper explosivity limit (UEL) (volume %)	10

Behaviour at sea

Additional data

Colour	colourless to yellow
Odour	banana-like
Standard behavior classification	FED

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	34
State	liquid

Temperature (°C)	ambient (cool)
Family name	esters
IMO class	3.3

Reactivity data

Water	Yes
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	No
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	2 - ≥ 2 and < 3
Bioaccumulation in BCF (A1B)	2 - ≥ 10 and < 100
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	FED - Floater/Evaporator/Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

IDHL	1000
TLV-TWA	100
TEEL-1 (mg/m3)	100 ppm
TEEL-2 (mg/m3)	100 ppm
TEEL-3 (mg/m3)	1000 ppm

Ecotoxicity

AMYL ALCOHOL primary

UN Number: 1105

Also known as: ALCOOL AMYLIQUE primaire, n-AMYL ALCOHOL, 1-AMYL ALCOHOL, AMYLOL, n-BUTYL CARBINOL, 1-BUTYLCARBINOL

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1105

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	810 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	88.15
Density of gas (kg/m ³)	3.93
Boiling Point (°C)	112/138
Melting Point (°C)	-79
Vapour Pressure (Pa)	407 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	300/400
Flash Point (°C)	-0.276923077
Lower explosivity limit (LEL) (volume %)	1.1
Upper explosivity limit (UEL) (volume %)	10.5

Behaviour at sea

Additional data

Colour	colourless
Odour	sweet, mild

Transportation data

Package group	II
Cargo group	20
State	liquid
Temperature (°C)	ambient

Pressure (Pa)	ambient
Family name	alcohols, glycols
IMO class	3.2

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	No
Oxidizing agents	Yes
Reducing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m3)	100 ppm
TEEL-2 (mg/m3)	100 ppm
TEEL-3 (mg/m3)	100 ppm

Ecotoxicity

ANILINE

UN Number: 1547 - CAS Number: 62-53-3

Also known as: AMINOBENZENE, AMIOPHEN, ANILINE OIL, ANYIRIM (TR), BENZENEAMINE, BENZENE, AMINO-, BENZIDAM, BLUE OIL (TR), CYANOL (TR), Aminophen, Benzenamine, Phenylamine, Aniline

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1547
CAS number	62-53-3
Formula	C ₆ H ₇ N

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	1022 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	4.26 [cSt] at a temperature of 20°C 3.76 [cSt] at a temperature of 25°C
Molar mass (g/mol)	93.13
Density of gas (kg/m ³)	4.128
Solubility (g/L)	35000 [g/L] at a temperature of 20°C and salinity of 0‰ 33000 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	184.4
Melting Point (°C)	-6
Critical molar volume (m ³ /mol)	0.000291
Critical temperature (°C)	705
Critical pressure (Pa)	5630000
Surface tension (mN/m)	42.9 [mN/m] at a temperature of 20°C 42.12 [mN/m] at a temperature of 25°C
Interfacial tension (mN/m)	5.8 [mN/m] at a temperature of 20°C and salinity of 0‰
Vapour Pressure (Pa)	40 [Pa] at a temperature of 20°C 90 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	530
Flash Point (°C)	76
Flash Point (Pensky-Martens closed cup) (°C)	70

Flash Point (Cleveland open cup) (°C)	75.6
Lower explosivity limit (LEL) (volume %)	1.3
Upper explosivity limit (UEL) (volume %)	11
Vapor enthalpy (J/Kg)	455707 [J/Kg] at a temperature of 184.4°C 599585 [J/Kg] at a temperature of 25°C
Combust enthalpy (J/Kg)	34800000
Specific heat capacity (J/(Kg·K))	2060.6
Combustion efficiency (%)	75
Mass flow rate of the combustion surface (Kg/(m ² ·s))	0.05
Rad fraction (%)	53
Henry's constant (mol/(m ³ ·Pa))	2.04

Behaviour at sea

Persistence (days)	1.6
Log kow	0.9
Log koc	1.84
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Biodegradation in marine environment (Half-life) (days)	10
Bioconcentration factor (BCF)	2.6

Additional data

Colour	colourless to yellow-brown	
Odour	weak odour	
MARPOL pollution category	Category	Description
	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.
Standard behavior classification	FD	

Transportation data

Transport mode	Bulk, Packaged
Package group	II
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	under pressure
Family name	aromatic amines
IMO class	6.1

Reactivity data

Acid(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	2 - Moderate
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	FD - Floater/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



IDHL	100	
Hazard statements	Health	
	H301	Toxic if swallowed.
	H311	Toxic in contact with skin.
	H317	May cause an allergic skin reaction.
	H318	Causes serious eye damage.
	H331	Toxic if inhaled.
	H341	Suspected of causing genetic defects.
	H351	Suspected of causing cancer.
	H372	Causes damage to organs through prolonged or repeated exposure, exposure cause the hazard:
	Environmental	
H400	Very toxic to aquatic life.	
H410	Very toxic to aquatic life with long lasting effects.	

Precautionary statements	Prevention				
		P273	Avoid release to the environment.		
	P280	Wear protective gloves/protective clothing/eye protection/face protection.			
	Response				
	P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.			
	P302 + P352	IF ON SKIN: Wash with plenty of soap and water.			
	P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.			
	P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.			
	10 min	30 min	60 min	4 hrs	8 hrs
AEGL-1 (ppm)	48	16			
AEGL-2 (ppm)	72	24	12		1.5
AEGL-3 (ppm)	120	40	20		2.5

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	19
Lowest median lethal concentration (LC50) on crustacean (mg/l)	0.1
Lowest median lethal concentration (LC50) on fishes (mg/l)	10.6
Highest no observed effect concentration (NOEC) on algae (mg/l)	2
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	0.015
Highest no observed effect concentration (NOEC) on fishes (mg/l)	0.39
Assessment factor (AF)	100 on the short term 100 on the long term
Predicted No Effect Concentration (PNEC) (µg/l)	1 [µg/l] on the short term 0.15 [µg/l] on the long term

ANTIMONY PENTACHLORIDE liquid

UN Number: 1730

Also known as: ANTIMONY CHLORIDE, ANTIMONY PERCHLORIDE, BUTTER OF ANTIMONY

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1730

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	2354 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	299.05
Boiling Point (°C)	175
Melting Point (°C)	-3
Vapour Pressure (Pa)	130 [Pa] at a temperature of 20°C

Behaviour at sea

Persistence (days) 1.6

Additional data

Colour	colourless to brown
Odour	unpleasant odour
Standard behavior classification	D, SD

Transportation data

Package group	II
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	under pressure

Reactivity data

Water	Yes
Acid(s)	No

Base(s)	No
Metal(s) and alloys	Yes
Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

IDHL	16 (as Sb)
TLV-TWA	0.1 (Sb)
TEEL-1 (mg/m3)	3.68
TEEL-2 (mg/m3)	6.14
TEEL-3 (mg/m3)	123

Ecotoxicity

ANTIMONY PENTAFLUORIDE

UN Number: 1732

Also known as: ANTIMONY (V) FLUORIDE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1732

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	2340 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	216.7
Boiling Point (°C)	143
Melting Point (°C)	8.3
Vapour Pressure (Pa)	130 [Pa] at a temperature of 20°C

Behaviour at sea

Persistence (days) 2.7

Additional data

Colour	colourless
Odour	sharp odour
Standard behavior classification	D, SD

Transportation data

Package group	II
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	under pressure

Reactivity data

Water	Yes
Acid(s)	No

Base(s)	No
Metal(s) and alloys	No
Oxidizing agents	No
Reducing agents	No
Combustibles	Yes
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

IDHL	16 (as Sb)
TLV-TWA	0.1 (Sb)
TEEL-1 (mg/m3)	0.89
TEEL-2 (mg/m3)	2.7
TEEL-3 (mg/m3)	89

Ecotoxicity

ANTIMONY POTASSIUM TARTRATE

UN Number: 1551

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1551

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	2600 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	334

Behaviour at sea

Additional data

Colour	white
Odour	odourless

Transportation data

Package group	III
State	solid
Temperature (°C)	ambient
Pressure (Pa)	ambient
IMO class	6.1

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

IDHL	16 (as Sb)
TLV-TWA	0.1 (Sb)
TEEL-1 (mg/m ³)	3.92
TEEL-2 (mg/m ³)	6.53

Ecotoxicity

ANTIMONY TRICHLORIDE solid

UN Number: 1733

Also known as: ANTIMONOUS CHLORIDE, ANTIMONY BUTTER, ANTIMONY CHLORIDE, BUTTER OF ANTIMONY, CAUSTIC ANTIMONY

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1733

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	3100 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	228
Boiling Point (°C)	223
Melting Point (°C)	73
Vapour Pressure (Pa)	130 [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Colour	white to pale yellow
Odour	sharp, unpleasant odour
Standard behavior classification	D, SD

Transportation data

Package group	II
State	solid
Temperature (°C)	ambient
Pressure (Pa)	under pressure

Reactivity data

Water	Yes
Acid(s)	No

Base(s)	No
Metal(s) and alloys	Yes
Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

IDHL	16 (as Sb)
TLV-TWA	0.1 (Sb)
TEEL-1 (mg/m3)	0.937
TEEL-2 (mg/m3)	0.937
TEEL-3 (mg/m3)	93.7

Ecotoxicity

ARSENIC ACID solid

UN Number: 1554

Also known as: ACIDE ARSENIQUE solide

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1554

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	2200 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	229.8
Boiling Point (°C)	120

Behaviour at sea

Additional data

Colour	white or colourless
Odour	odourless
Standard behavior classification	SD

Transportation data

State	solid
Temperature (°C)	ambient
Pressure (Pa)	under pressure
IMO class	6.1

Reactivity data

Water	No
Acid(s)	No
Base(s)	No
Metal(s) and alloys	Yes
Oxidizing agents	No

Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

IDHL	32 (as As)
TLV-TWA	0.003 (As)
TEEL-1 (mg/m3)	0.4
TEEL-3 (mg/m3)	9.5

Ecotoxicity

ARSENIC TRICHLORIDE

UN Number: 1560

Also known as: ARESENIUS CHLORIDE, ARSENIC BUTTER, ARSENIC CHLORIDE, ARSENIC CHLORIDE (fuming), ARSENOUS CHLORIDE, BUTTER OF ARSENIC

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1560

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	2156 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	181.3
Boiling Point (°C)	130.4
Melting Point (°C)	-16
Vapour Pressure (Pa)	1300 [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Colour	colourless
Odour	unpleasant odour
Standard behavior classification	D, SD

Transportation data

State	liquid
Temperature (°C)	ambient
Pressure (Pa)	under pressure
IMO class	6.1

Reactivity data

Water	Yes
Acid(s)	No

Base(s)	No
Metal(s) and alloys	Yes
Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

IDHL	32 (as As)
TLV-TWA	0.003 (As)
TEEL-1 (mg/m3)	0.0726 ppm
TEEL-2 (mg/m3)	1.35 ppm
TEEL-3 (mg/m3)	12.1 ppm

Ecotoxicity

ARSENIC TRIOXIDE

UN Number: 1561

Also known as: ARSENOUS SESQUIOXIDE, ARSENOUS ACID, ARSENOUS ACID ANHYDRIDE, ARSENOUS OXIDE, ARSODENT, CLAUDERITE, DIARSENIC TRIOXIDE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1561

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	3700 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	197.8
Boiling Point (°C)	457
Melting Point (°C)	315

Behaviour at sea

Additional data

Colour	white
Odour	odourless

Transportation data

Package group	II
State	solid
Temperature (°C)	ambient
Pressure (Pa)	under pressure
IMO class	6.1

Reactivity data

Water No

GESAMP Hazard profile

Human toxicity threshold

IDHL	0.56
TLV-TWA	0.0012(As)
TEEL-1 (mg/m3)	0.4
TEEL-3 (mg/m3)	9.1

Ecotoxicity

AVIATION ALKYLATES (C8 paraffins & isoparaffins, BPt 95-120 C)

Also known as: ALKYLATES D'AVIATION paraffines & isoparaffines en C8, Teb 95 °C

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	700 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	114
Boiling Point (°C)	95/120
Melting Point (°C)	1.833333333
Flash Point (°C)	-0.923076923

Behaviour at sea

Additional data

Standard behavior classification	F/FE/E
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Transportation data

Cargo group	33
Family name	miscell. hydroc. mixt

Reactivity data

Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	5 - ≥ 5 and \leq ca.7
Bioaccumulation (A1)	5 - Very high potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable

Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Eye irritation/corrosivity (D2)	0 - Not irritating
Interference with coastal amenities (E2)	FE - Floater/Evaporator
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

AZINPHOS-METHYL

UN Number: 2783

Also known as: AZINPHOS-METHYLE, CARFENE, CORTENE (TR), COTNEON, COTNION METHYL (TR), CRYSTHION 2L (TR), DBD

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 2783

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	1400 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	317
Melting Point (°C)	74
Vapour Pressure (Pa)	<0.001 [Pa] at a temperature of 20°C

Behaviour at sea

Persistence (days) 2.7

Additional data

Colour	brown
Marine pollutant	P
Standard behavior classification	D, SD, S

Transportation data

Transport mode	Bulk, Packaged
Package group	II
State	solid
Temperature (°C)	ambient
Pressure (Pa)	ambient
IMO class	6.1

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

IDHL	1.5
TLV-TWA	0.015
TEEL-1 (mg/m ³)	0.6
TEEL-2 (mg/m ³)	0.7
TEEL-3 (mg/m ³)	10

Ecotoxicity

BENZALDEHYDE

UN Number: 1990

Also known as: ARTIFICIAL ESSENTIAL OIL OF ALMOND, BENZENE CARBALDEHYDE, BENZENE CARBONAL, BENZOIC ALDEHYDE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1990

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1046 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	106.12
Density of gas (kg/m ³)	4.773
Boiling Point (°C)	179
Melting Point (°C)	-26
Vapour Pressure (Pa)	130 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	190
Flash Point (°C)	64
Lower explosivity limit (LEL) (volume %)	1.4

Behaviour at sea

Persistence (days) 0.8

Additional data

Colour	colourless to pale yellow
Odour	bitter, almond odour
Standard behavior classification	SD

Transportation data

State	liquid
Temperature (°C)	ambient
IMO class	6.1

Reactivity data

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	FD - Floater/Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

TEEL-1 (mg/m3)	4 ppm
TEEL-2 (mg/m3)	4 ppm
TEEL-3 (mg/m3)	150 ppm

Ecotoxicity

BENZENE

UN Number: 1114 - CAS Number: 71-43-2

Also known as: 6-ANNULENE, BENZINE (T), BENZOL, BENZOL (T), BENZOLE (T), BENZOLENE, BICARBURET OF HYDROGEN, CARBON OIL, COAL NAPHTA (T), CYCLOHEXATRIENE (trace 1), CYCLOHEXATRIENE (trace 2), Coal Naphtha, Cyclohexatriene, Phenyl Hydride, (6)Annulene, Benzole, Pyrobenzol, Pyrobenzole, Benzene

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1114
CAS number	71-43-2
Formula	C ₆ H ₆

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	879 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	0.74 [cSt] at a temperature of 20°C 0.69 [cSt] at a temperature of 25°C
Molar mass (g/mol)	78.11
Density of gas (kg/m ³)	3.483
Solubility (g/L)	1780 [g/L] at a temperature of 20°C and salinity of 0‰ 1800 [g/L] at a temperature of 25°C and salinity of 0‰ 1360 [g/L] at a temperature of 25°C and salinity of 35‰
Boiling Point (°C)	80.3
Melting Point (°C)	5.5
Critical molar volume (m ³ /mol)	0.000265
Critical temperature (°C)	562.05
Critical pressure (Pa)	4895000
Surface tension (mN/m)	28.9 [mN/m] at a temperature of 20°C 28.22 [mN/m] at a temperature of 25°C
Interfacial tension (mN/m)	35 [mN/m] at a temperature of 20°C and salinity of 0‰
Vapour Pressure (Pa)	10130 [Pa] at a temperature of 20°C 12700 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	550

Flash Point (°C)	-11
Flash Point (Pensky-Martens closed cup) (°C)	-11
Lower explosivity limit (LEL) (volume %)	1.4
Upper explosivity limit (UEL) (volume %)	8
Vapor enthalpy (J/Kg)	393292 [J/Kg] at a temperature of 80.1°C 433107 [J/Kg] at a temperature of 25°C
Combus enthalpy (J/Kg)	40100000
Specific heat capacity (J/(Kg·K))	1745
Combustion efficiency (%)	70
Mass flow rate of the combustion surface (Kg/(m ² ·s))	0.09
Rad fraction (%)	60
Henry's constant (mol/(m ³ ·Pa))	545

Behaviour at sea

Log kow	2.13
Log koc	1.85
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Biodegradation in marine environment (Half-life) (days)	50
Bioconcentration factor (BCF)	11

Additional data

Colour	colourless
Odour	gasoline odour

MARPOL pollution category	Category	Description
	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.

Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	32
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	under pressure
Family name	aromatic hydrocarbons
IMO class	3.2

Reactivity data

Acid(s)	Yes
Static electricity	No
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	2 - ≥ 2 and < 3
Bioaccumulation in BCF (A1B)	1 - ≥ 1 and < 10
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	E - Evaporator
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



IDHL	3000	
Hazard statements	Physical	
	H225	Highly flammable liquid and vapour.
	Health	
	H304	May be fatal if swallowed and enters airways.
	H315	Causes skin irritation.
	H319	Causes serious eye irritation.
	H340	May cause genetic defects. Exposure cause the hazard:
	H350	May cause cancer.
	H372	Causes damage to organs through prolonged or repeated exposure, exposure cause the hazard:

Precautionary statements	Prevention	
	P202	Do not handle until all safety precautions have been read and understood.
	P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
	P243	Take precautionary measures against static discharge.
	P280	Wear protective gloves/protective clothing/eye protection/face protection.
	Response	
	P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
	P303 + P361 + P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
	P331	Do NOT induce vomiting.
ERPG-1 (ppm)	50	
ERPG-2 (ppm)	150	
ERPG-3 (ppm)	1000	

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	29
Lowest median lethal concentration (LC50) on crustacean (mg/l)	10
Lowest median lethal concentration (LC50) on fishes (mg/l)	4.9
Highest no observed effect concentration (NOEC) on algae (mg/l)	9.6
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	3
Highest no observed effect concentration (NOEC) on fishes (mg/l)	0.8
Assessment factor (AF)	100 on the short term 100 on the long term
Predicted No Effect Concentration (PNEC) (µg/l)	49 [µg/l] on the short term 8 [µg/l] on the long term

BENZENE SULPHONYL CHLORIDE

UN Number: 2225 - CAS Number: 98-09-9

Also known as: BENZENESULFONIC CHLORIDE, BENZENESULPHOCHLORIDE, BENZENESULPHONECHLORIDE, CHLORURE DE BENZENESULFONYLE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2225
CAS number	98-09-9

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1400 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	176.62
Density of gas (kg/m ³)	7.85 (E)
Boiling Point (°C)	251, decomp.
Melting Point (°C)	15
Vapour Pressure (Pa)	130 (66°C) [Pa] at a temperature of 20°C
Flash Point (°C)	128

Behaviour at sea

Additional data

Colour	colourless to brown
Odour	irritating, pungent
Standard behavior classification	S/SD

Transportation data

Transport mode	Bulk, Packaged
Package group	III
State	liquid

Reactivity data

Water	Yes
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	Yes
Oxidizing agents	Yes
Combustibles	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation in BCF (A1B)	1 - ≥ 1 and < 10
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Skin irritation/corrosivity (D1)	3 - Corrosive
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Specific Health Concern (D3)	Ss - Skin Sensitization
Interference with coastal amenities (E2)	SD - Sinker/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TEEL-1 (mg/m3)	1.5
TEEL-2 (mg/m3)	200
TEEL-3 (mg/m3)	200

Ecotoxicity

BENZYL ACETATE

CAS Number: 140-11-4

Also known as: ACETATE DE BENZYLE, ACETIC ACID, BENZYL ESTER, ACETIC ACID, PHENYLMETHYL ESTER, alpha-ACETOXYTOLUENE, BENZYL ETHANOATE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 140-11-4

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1100 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	150.2
Density of gas (kg/m ³)	6.71
Boiling Point (°C)	212
Melting Point (°C)	-52
Vapour Pressure (Pa)	130 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	460
Flash Point (°C)	102
Lower explosivity limit (LEL) (volume %)	0.9
Upper explosivity limit (UEL) (volume %)	8.4

Behaviour at sea

Additional data

Colour	colourless
Odour	characteristic, pear-like

Transportation data

Cargo group	34
State	liquid
Family name	esters

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	No
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	1 - Low
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	SD - Sinker/Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

TLV-TWA	10
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Ecotoxicity

BENZYL ALCOHOL

UN Number: 1993 - CAS Number: 100-51-6

Also known as: ALCOOL BENZYLIQUE, Tert-Butyl Ethyl Ether, 1,1-Dimethylethyl Ethyl Ether, 2-Ethoxy-2-Methylpropane, Ethyl 1,1-Dimethylethyl Ether, Ethyl Tert-Butyl Oxide, Methyl-2-Ethoxypropane, 2-Methyl-2-Ethoxypropane, Ethyl T-Butyl Ether, Ethyl Tert-Butyl Ether

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1993
CAS number	100-51-6
Formula	C ₆ H ₁₄ O

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	1050 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	108.13
Density of gas (kg/m ³)	4.773
Solubility (g/L)	12400 [g/L] at a temperature of 20°C and salinity of 0‰ 13000 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	205
Melting Point (°C)	-15
Critical molar volume (m ³ /mol)	0.000395
Critical temperature (°C)	509.4
Critical pressure (Pa)	2934000
Vapour Pressure (Pa)	13 [Pa] at a temperature of 20°C 20664.97 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	435
Flash Point (°C)	101
Lower explosivity limit (LEL) (volume %)	1.3
Upper explosivity limit (UEL) (volume %)	1.3
Combust enthalpy (J/Kg)	36300000
Combustion efficiency (%)	96
Mass flow rate of the combustion surface (Kg/(m ² ·s))	0.08

Rad fraction (%)	23
Henry's constant (mol/(m ³ ·Pa))	165.6

Behaviour at sea

Persistence (days)	1.6
Log kow	1.68
Log koc	2.29
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Biodegradation in marine environment (Half-life) (days)	Not biodegradable
Bioconcentration factor (BCF)	11.1

Additional data

Colour	colourless
Odour	mild pleasant odour

MARPOL pollution category	Category	Description
	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.

Standard behavior classification	SD
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Transportation data

Transport mode	Bulk, Packaged
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient

Reactivity data

Water	No
Acid(s)	No
Base(s)	No
Metal(s) and alloys	No
Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	SD - Sinker/Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold



Hazard statements	Physical	
	H225	Highly flammable liquid and vapour.
	Health	
	H336	May cause drowsiness or dizziness.
Precautionary statements	Prevention	
	P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
	P243	Take precautionary measures against static discharge.
	P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
	P271	Use only outdoors or in a well-ventilated area.
	Storage	
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.	
TEEL-1 (mg/m3)	60	
TEEL-2 (mg/m3)	150	
TEEL-3 (mg/m3)	150	

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	1100
Lowest median lethal concentration (LC50) on crustacean (mg/l)	37
Lowest median lethal concentration (LC50) on fishes (mg/l)	41.5
Highest no observed effect concentration (NOEC) on algae (mg/l)	7.5
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	51

Highest no observed effect concentration (NOEC) on fishes (mg/l)	63.9
Assessment factor (AF)	1000 on the short term 10000 on the long term
Predicted No Effect Concentration (PNEC) (µg/l)	37 [µg/l] on the short term 3.7 [µg/l] on the long term

BENZYL ALCOHOL

UN Number: 1738 - CAS Number: 100-44-7

Also known as: CHLORMETHYLBENZENE, CHLOROPHENYLMETHANE, alpha-CHLOROTOLUENE, CHLORURE DE BENZYLE, Chloromethyl Benzene, Alpha-Chlorotoluene, Benzyl Chloride, α -Chlorotoluene

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1738
CAS number	100-44-7
Formula	C ₇ H ₇ Cl

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	1100 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	126.6
Density of gas (kg/m ³)	5.16
Solubility (g/L)	1200 [g/L] at a temperature of 20°C and salinity of 0‰ 525 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	179.6
Melting Point (°C)	-39
Critical temperature (°C)	411
Surface tension (mN/m)	37.46 [mN/m] at a temperature of 20°C 36.76 [mN/m] at a temperature of 26.3°C
Vapour Pressure (Pa)	120 [Pa] at a temperature of 20°C 133.3 [Pa] at a temperature of 22°C 164 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	585
Flash Point (°C)	60
Flash Point (Pensky-Martens closed cup) (°C)	67
Flash Point (Cleveland open cup) (°C)	74
Lower explosivity limit (LEL) (volume %)	1.1
Upper explosivity limit (UEL) (volume %)	7.1
Vapor enthalpy (J/Kg)	395785 [J/Kg] at a temperature of 25°C

Combustion enthalpy (J/Kg)	29292802
Specific heat capacity (J/(Kg·K))	1440
Henry's constant (mol/(m ³ ·Pa))	41.54

Behaviour at sea

Persistence (days)	3.1
Log K _{ow}	0.36
Log K _{oc}	2.65

Additional data

Colour	colourless to yellow
Odour	sharp, irritating odour

MARPOL pollution category	Category	Description
	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.

Transportation data

Transport mode	Bulk, Packaged
Package group	II
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	under pressure
IMO class	6.1

Reactivity data

Water	Yes
Acid(s)	No
Base(s)	No
Metal(s) and alloys	Yes
Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Bioaccumulation in logP _{ow} (A1A)	1 - ≥1 and <2
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate

Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	SD - Sinker/Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold



IDHL	10
Hazard statements	Health
	H302 Harmful if swallowed.
	H315 Causes skin irritation.
	H317 May cause an allergic skin reaction.
	H318 Causes serious eye damage.
	H331 Toxic if inhaled.
	H335 May cause respiratory irritation.
	H350 May cause cancer.
H373 May cause damage to organs through prolonged or repeated exposure, exposure cause the hazard:	
ERPG-2 (ppm)	10
ERPG-3 (ppm)	50

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	19.3
Lowest median lethal concentration (LC50) on crustacean (mg/l)	3.9
Lowest median lethal concentration (LC50) on fishes (mg/l)	6
Highest no observed effect concentration (NOEC) on algae (mg/l)	10
Assessment factor (AF)	100 on the short term
	100 on the long term
Predicted No Effect Concentration (PNEC) (µg/l)	3.9 [µg/l] on the short term
	1 [µg/l] on the long term

BENZYL CHLOROFORMATE

UN Number: 1739

Also known as: BENZYL CHLOROCARBONATE, CHLOROFORMATE DE BENZYLE, CHLOROFORMIC ACID, BENZYL ESTER

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1739

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m³)	1220 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	170.6
Boiling Point (°C)	152

Behaviour at sea

Persistence (days) 2.7

Additional data

Colour	colourless
Odour	sharp, irritating odour
Standard behavior classification	DE, D, SD

Transportation data

State	liquid
Temperature (°C)	ambient
Pressure (Pa)	under pressure

Reactivity data

Water	Yes
Acid(s)	No
Base(s)	No
Metal(s) and alloys	Yes

Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m3)	0.125 ppm
TEEL-2 (mg/m3)	0.97 ppm
TEEL-3 (mg/m3)	2.9 ppm

Ecotoxicity

BENZYL normal-BUTYL PHTHALATE

UN Number: 3082 - CAS Number: 85-68-7

Also known as: BBP, BENZYL N-BUTYL PHTHALATE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	3082
CAS number	85-68-7

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1120 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	313
Boiling Point (°C)	370
Vapour Pressure (Pa)	21 [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Colour	colourless
Odour	weak odour

Transportation data

State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient

Reactivity data

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	4 - ≥4 and <5
Bioaccumulation in BCF (A1B)	4 - ≥500 and <4000

Bioaccumulation (A1)	4 - High potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	2 - Moderate
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Eye irritation/corrosivity (D2)	0 - Not irritating
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

Ecotoxicity

beta-PROPIOLACTONE

CAS Number: 57-57-8

Also known as: BETAPRONE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 57-57-8

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1148 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	72.1
Density of gas (kg/m ³)	3.225
Boiling Point (°C)	155
Melting Point (°C)	-33
Vapour Pressure (Pa)	500 [Pa] at a temperature of 20°C
Flash Point (°C)	74
Lower explosivity limit (LEL) (volume %)	2.9

Behaviour at sea

Additional data

Colour	colourless
Odour	irritating odour

Transportation data

State	liquid
Temperature (°C)	<16
Pressure (Pa)	under pressure

Reactivity data

Water	Yes
Acid(s)	No

Base(s)	No
Metal(s) and alloys	No
Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	4 - High
Skin irritation/corrosivity (D1)	3B - Corrosive
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TLV-TWA	0.5
TEEL-1 (mg/m3)	0.509 ppm
TEEL-2 (mg/m3)	5.09 ppm
TEEL-3 (mg/m3)	15 ppm

Ecotoxicity

BISPHENOL A

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	1200 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	228.28
Density of gas (kg/m ³)	1.548
Boiling Point (°C)	250
Melting Point (°C)	153
Vapour Pressure (Pa)	520 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	600
Flash Point (°C)	207

Behaviour at sea

Additional data

Colour	white to light brown
Odour	weak medicine odour
Standard behavior classification	D, SD, S

Transportation data

State	solid
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Reactivity data

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m ³)	15
TEEL-2 (mg/m ³)	100
TEEL-3 (mg/m ³)	500

Ecotoxicity

BLACK POWDER

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Solid
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Behaviour at sea

Additional data

Transportation data

State	solid
IMO class	1.1 D

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

Ecotoxicity

BROMOCHLOROMETHANE

UN Number: 1887 - CAS Number: 74-97-5

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1887
CAS number	74-97-5

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1930 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	129.39
Density of gas (kg/m ³)	5.93
Boiling Point (°C)	68
Melting Point (°C)	-88
Vapour Pressure (Pa)	15330 [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Colour	colourless to pale yellow
Odour	odourless
Standard behavior classification	SD

Transportation data

Transport mode	Bulk, Packaged
Package group	III
State	liquid
IMO class	6.1

Reactivity data

Metal(s) and alloys	Yes (Al, Mg, Zn)
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GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation in BCF (A1B)	1 - ≥ 1 and < 10
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	0 - Not irritating
Interference with coastal amenities (E2)	SD - Sinker/Dissolver
Effects on wildlife and bottom habitats (E3)	1 - Is a floater; and/or is slightly acutely toxic; and/or is mildly irritant to skin and/or eyes

Human toxicity threshold

TEEL-1 (mg/m3)	600 ppm
TEEL-2 (mg/m3)	1000 ppm
TEEL-3 (mg/m3)	2000 ppm

Ecotoxicity

BUTADIENES inhibited

UN Number: 1010

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1010

Physical chemical data

Physical State (20°C)	Gas
Density (kg/m ³)	2.451 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	54.09
Density of gas (kg/m ³)	2.451
Boiling Point (°C)	-4.2
Melting Point (°C)	-109
Vapour Pressure (Pa)	506500 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	415
Flash Point (°C)	-85
Upper explosivity limit (UEL) (volume %)	11.5

Behaviour at sea

Additional data

Colour	colourless
Odour	gasoline odour

Transportation data

Transport mode	Gas, Packaged
Ship type	2G, 2PG
Cargo group	30
State	gas
Temperature (°C)	ambient
Pressure (Pa)	under pressure
Family name	olefins
IMO class	2(2.1)

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	No
Metal(s) and alloys	No
Static electricity	Yes
Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

IDHL	20000
TLV-TWA	1000
ERPG-1 (ppm)	10
ERPG-2 (ppm)	200
ERPG-3 (ppm)	5000

Ecotoxicity

BUTANE

UN Number: 1011 - CAS Number: 106-97-8

Also known as: Methylethylmethane, Butane

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1011
CAS number	106-97-8
Formula	C ₄ H ₁₀

Physical chemical data

Physical State (20°C)	Gas
Physical State (25°C)	Gas
Density (kg/m ³)	2.709 [Kg/m ³] at a temperature of 20°C 573 [Kg/m ³] at a temperature of 25°C
Molar mass (g/mol)	58.12
Density of gas (kg/m ³)	2.709
Solubility (g/L)	61 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	-1
Melting Point (°C)	-135
Critical temperature (°C)	425.13
Critical pressure (Pa)	3796000
Surface tension (mN/m)	14.7 [mN/m] at a temperature of 0°C
Interfacial tension (mN/m)	65 [mN/m] at a temperature of 22°C and salinity of 0‰
Vapour Pressure (Pa)	202600 [Pa] at a temperature of 20°C 243680 [Pa] at a temperature of 25°C
Vapour pressure at 70% of critical temperature (Pa)	239070
Ignition Temperature (°C)	365
Flash Point (°C)	-60
Flash Point (Pensky-Martens closed cup) (°C)	-60
Lower explosivity limit (LEL) (volume %)	1.9
Upper explosivity limit (UEL) (volume %)	8.5
Vapor enthalpy (J/Kg)	385211 [J/Kg] at a temperature of -0.5°C
Combustion enthalpy (J/Kg)	45385000

Henry's constant (mol/(m ³ ·Pa))	96258.75
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Behaviour at sea

Log kow	2.89
Log koc	1.6
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Bioconcentration factor (BCF)	40

Additional data

Colour	colourless				
Odour	gasoline odour				
MARPOL pollution category	<table border="1"> <thead> <tr> <th>Category</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Other Substances</td> <td>Substances which have been evaluated and found to fall outside Category X, Y or Z because they are considered to present no harm to marine resources, human health, amenities or other legitimate uses of the sea when discharged into the sea from tank cleaning of deballasting operations. The discharge of bilge or ballast water or other residues or mixtures containing these substances are not subject to any requirements of MARPOL Annex II.</td> </tr> </tbody> </table>	Category	Description	Other Substances	Substances which have been evaluated and found to fall outside Category X, Y or Z because they are considered to present no harm to marine resources, human health, amenities or other legitimate uses of the sea when discharged into the sea from tank cleaning of deballasting operations. The discharge of bilge or ballast water or other residues or mixtures containing these substances are not subject to any requirements of MARPOL Annex II.
Category	Description				
Other Substances	Substances which have been evaluated and found to fall outside Category X, Y or Z because they are considered to present no harm to marine resources, human health, amenities or other legitimate uses of the sea when discharged into the sea from tank cleaning of deballasting operations. The discharge of bilge or ballast water or other residues or mixtures containing these substances are not subject to any requirements of MARPOL Annex II.				

Transportation data

Transport mode	Gas,Packaged
Ship type	2G,2PG
Cargo group	31
State	liq.compr.gas
Temperature (°C)	ambient
Pressure (Pa)	under pressure
Family name	paraffins
IMO class	2(2.1)

Reactivity data

Water	No
Static electricity	Yes

GESAMP Hazard profile

Interference with coastal amenities (E2)	G - Gas
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Human toxicity threshold



Hazard statements	Physical
	H220 Extremely flammable gas.
TEEL-1 (mg/m3)	5500 ppm
TEEL-2 (mg/m3)	17000 ppm
TEEL-3 (mg/m3)	53000 ppm

Ecotoxicity

Lowest median lethal concentration (LC50) on crustacean (mg/l)	69.43
Lowest median lethal concentration (LC50) on fishes (mg/l)	49.9

BUTENE OLIGOMER

Also known as: BUTENE oligomère

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	730 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	112.22
Boiling Point (°C)	60/282
Melting Point (°C)	< -50
Flash Point (°C)	> 20

Behaviour at sea

Additional data

Colour	colourless
Odour	gasoline odour
Standard behavior classification	F/FE/E

Transportation data

Cargo group	30
State	liquid
Family name	olefins

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
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Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	0 - Not irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	FE - Floater/Evaporator
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

BUTYL BENZENE

UN Number: 2709 - CAS Number: 104-51-8

Also known as: BUTYLBENZENE, 1-BUTYLBENZENE, n-BUTYLBENZENE

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number	2709
CAS number	104-51-8

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	860 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	134.22
Boiling Point (°C)	183
Melting Point (°C)	-88
Vapour Pressure (Pa)	133 (22.7°C) [Pa] at a temperature of 20°C
Ignition Temperature (°C)	412
Flash Point (°C)	59
Lower explosivity limit (LEL) (volume %)	0.8
Upper explosivity limit (UEL) (volume %)	5.8

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless

Transportation data

Transport mode	Bulk.Packaged
Package group	III
Cargo group	32
State	liquid
Family name	aromatic hydrocarbons

IMO class	3.3
Reactivity data	
Water	No
Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	4 - ≥ 4 and < 5
Bioaccumulation (A1)	4 - High potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	1 - Low
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	Fp - Persistent slick forming substance
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

TEEL-1 (mg/m3)	20 ppm
TEEL-2 (mg/m3)	150 ppm
TEEL-3 (mg/m3)	750 ppm

Ecotoxicity

BUTYL BENZYL PHTHALATE

UN Number: 3082

Also known as: BENZENE-1,2-DICARBOXYLIC ACID, BENZYL BUTYL ESTER, BENZYL-n-BUTYL PHTHALATE, BUTYL PHENYLMETHYL ESTER

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 3082

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1120 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	313
Density of gas (kg/m ³)	13.945
Boiling Point (°C)	370
Melting Point (°C)	1.285714286
Vapour Pressure (Pa)	< 0.1 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	435
Flash Point (°C)	199

Behaviour at sea

Additional data

Colour	colourless
Odour	slight

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	34
State	liquid
Temperature (°C)	ambient
Family name	esters

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	No
Metal(s) and alloys	No
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	4 - ≥ 4 and < 5
Bioaccumulation in BCF (A1B)	4 - ≥ 500 and < 4000
Bioaccumulation (A1)	4 - High potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	2 - Moderate
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	0 - Not irritating
Eye irritation/corrosivity (D2)	0 - Not irritating
Specific Health Concern (D3)	R - Reprotoxicity
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TEEL-1 (mg/m3)	15
TEEL-2 (mg/m3)	500
TEEL-3 (mg/m3)	500

Ecotoxicity

BUTYL BUTYRATE

UN Number: 3272 - CAS Number: 109-21-7

Also known as: BUTANOIC ACID, BUTYL ESTER, BUTYLBUTANOATE, BUTYRATE DE BUTYLE, BUTYRIC ACID, BUTYL ESTER

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	3272
CAS number	109-21-7

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	872 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	144.21
Density of gas (kg/m ³)	6.41
Boiling Point (°C)	166.6
Melting Point (°C)	-91.5
Flash Point (°C)	53.3

Behaviour at sea

Additional data

Colour	colourless
Odour	apple odour
Standard behavior classification	F/FE/E

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	34
State	liquid
Temperature (°C)	ambient
Family name	esters

IMO class	3.3
Reactivity data	
Water	No
Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	2 - ≥ 2 and < 3
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Interference with coastal amenities (E2)	FE - Floater/Evaporator
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

TEEL-1 (mg/m3)	5 ppm
TEEL-2 (mg/m3)	35 ppm
TEEL-3 (mg/m3)	150 ppm

Ecotoxicity

BUTYL STEARATE

Also known as: BUTYLOCTADECANOATE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	861 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	340
Boiling Point (°C)	220/225
Melting Point (°C)	17/22
Flash Point (°C)	160

Behaviour at sea

Additional data

Colour	colourless
Odour	faint fatty odour

Transportation data

State	liquid
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Reactivity data

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Skin irritation/corrosivity (D1)	2 - Irritating
Interference with coastal amenities (E2)	Fp - Persistent slick forming substance

Effects on wildlife and bottom habitats (E3)

2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

BUTYL, DECYL, CETYL-EICOSYL METHACRYLATE

Also known as: BUTYL, DECYL, CETYL, EICOSYL 2-METHYL-2-PROPENOATE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Liquid
Molar mass (g/mol)	142.2
Boiling Point (°C)	163
Melting Point (°C)	-50
Vapour Pressure (Pa)	300 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	290
Flash Point (°C)	50

Behaviour at sea

Additional data

Colour	colourless
Odour	mild

Transportation data

Cargo group	14
State	liquid
Temperature (°C)	ambient
Family name	acrylates

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	5 - ≥ 5 and \leq ca.7
Bioaccumulation (A1)	5 - Very high potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	FE - Floater/Evaporator
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

TEEL-1 (mg/m3)	7.5
TEEL-2 (mg/m3)	50
TEEL-3 (mg/m3)	500

Ecotoxicity

BUTYLAMINE (normal, secondary, tertiary)

UN Number: 1125 - CAS Number: 109-73-9

Also known as: 1-AMINOBTUTANE, 1-BUTANAMINE, N-BUTYLAMINE 1-AMINOBTUTANE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1125
CAS number	109-73-9

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	741 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	73.14
Density of gas (kg/m ³)	3.225
Boiling Point (°C)	77
Melting Point (°C)	-50
Vapour Pressure (Pa)	9100 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	312
Flash Point (°C)	-3
Lower explosivity limit (LEL) (volume %)	1.7
Upper explosivity limit (UEL) (volume %)	9.8

Behaviour at sea

Additional data

Colour	colourless
Odour	ammonia, fish odour

Transportation data

Transport mode	Bulk, Packaged
Package group	II
State	liquid
Temperature (°C)	ambient

Pressure (Pa)	ambient
Family name	aliphatic amines
IMO class	3.2

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	No
Metal(s) and alloys	Yes
Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	DE - Dissolver/Evaporator
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

IDHL	3000
TEEL-1 (mg/m3)	7.5 ppm
TEEL-2 (mg/m3)	50 ppm
TEEL-3 (mg/m3)	300 ppm

Ecotoxicity

BUTYLENE

UN Number: 1012

Also known as: BUTENE

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number 1012

Physical chemical data

Physical State (20°C)	Gas
Density (kg/m ³)	2.451 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	56.1
Density of gas (kg/m ³)	2.451
Boiling Point (°C)	-7
Melting Point (°C)	-185
Vapour Pressure (Pa)	253250 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	440
Flash Point (°C)	-12
Lower explosivity limit (LEL) (volume %)	1.6
Upper explosivity limit (UEL) (volume %)	9.3

Behaviour at sea

Additional data

Colour	colourless
Odour	fragrant, gasoline odour

Transportation data

Transport mode	Gas, Packaged
Ship type	2G, 2PG
Cargo group	30
State	liq.compr.gas
Temperature (°C)	ambient

Pressure (Pa)	under pressure
Family name	olefins
IMO class	2(2.1)

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Human toxicity threshold

Ecotoxicity

BUTYLENE GLYCOL

CAS Number: 110-63-4

Also known as: BUTANEDIOL, BUTYLENEGLYCOL, 1,3 BUTYLENEGLYCOL, DIHYDROXYBUTANE, 1,4-Butanediol, Butane-1,4-Diol, 1,4-Butylene Glycol, Tetramethylene Glycol, 1,4-Dihydroxybutane, Butylene Glycol

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number	110-63-4
Formula	C ₄ H ₁₀ O ₂

Physical chemical data

Physical State (20°C)	Liquid/Solid
Physical State (25°C)	Liquid
Density (kg/m ³)	1010 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	87.74 [cSt] at a temperature of 20°C 70.3 [cSt] at a temperature of 25°C
Molar mass (g/mol)	89.6
Density of gas (kg/m ³)	40
Solubility (g/L)	100000 [g/L] at a temperature of 20°C and salinity of 0‰ 100000 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	207.5
Melting Point (°C)	< 23
Critical molar volume (m ³ /mol)	0.000305
Critical temperature (°C)	692.4
Critical pressure (Pa)	5180000
Surface tension (mN/m)	44.6 [mN/m] at a temperature of 20°C
Vapour Pressure (Pa)	100 [Pa] at a temperature of 20°C 1.9 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	377
Flash Point (°C)	121
Flash Point (Pensky-Martens closed cup) (°C)	132
Flash Point (Cleveland open cup) (°C)	121
Lower explosivity limit (LEL) (volume %)	1.9

Vapor enthalpy (J/Kg)	585000 [J/Kg] at a temperature of 235°C 826222 [J/Kg] at a temperature of 25°C
Combustion enthalpy (J/Kg)	27607328
Specific heat capacity (J/(Kg·K))	2521
Henry's constant (mol/(m ³ ·Pa))	0.00013

Behaviour at sea

Log K _{ow}	0.5
Log K _{oc}	0
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable

Additional data

Colour	colourless
Odour	odourless

MARPOL pollution category	Category	Description
	Z	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment.

Transportation data

Cargo group	20
Temperature (°C)	ambient
Family name	alcohols, glycols

Reactivity data

Water	No
Abilities	Miscible in water.
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	No
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logP _{ow} (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic

Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	0 - Not irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	1 - Is a floater; and/or is slightly acutely toxic; and/or is mildly irritant to skin and/or eyes

Human toxicity threshold



Hazard statements	Health	
	H302	Harmful if swallowed.
	H336	May cause drowsiness or dizziness.
Precautionary statements	Prevention	
	P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
	P264	Wash ... thoroughly after handling.
	P270	Do not eat, drink or smoke when using this product.
	Response	
	P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
	P330	Rinse mouth.
	Disposal	
	P501	Dispose of contents/container to ...
TEEL-1 (mg/m3)	3.5	
TEEL-2 (mg/m3)	25	
TEEL-3 (mg/m3)	250	

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	> 1000
Lowest median lethal concentration (LC50) on crustacean (mg/l)	> 85
Lowest median lethal concentration (LC50) on fishes (mg/l)	> 100
Highest no observed effect concentration (NOEC) on algae (mg/l)	> 1000
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	> 85
Assessment factor (AF)	10000 on the short term
Predicted No Effect Concentration (PNEC) (µg/l)	80 [µg/l] on the short term

BUTYRALDEHYDE

UN Number: 1129 - CAS Number: 123-72-8

Also known as: BUTAL, BUTALDEHYDE, BUTANAL, BUTYL ALDEHYDE, BUTYRAL, 2-Butanone, 3-Butanone, Butanone, Ethyl Methyl Ketone, Mek, Methyl Acetone, Methyl-2-Propanone, Methylethyl Ketone, Methylethylketone, Butan-2-One, Methyl Ethyl Ketone

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1129
CAS number	123-72-8
Formula	C ₄ H ₈ O

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	803 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	0.51 [cSt] at a temperature of 20°C 0.5 [cSt] at a temperature of 25°C
Molar mass (g/mol)	72.11
Density of gas (kg/m ³)	3.225
Solubility (g/L)	263000 [g/L] at a temperature of 20°C and salinity of 0‰ 136000 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	75
Melting Point (°C)	-97
Critical molar volume (m ³ /mol)	0.000267
Critical temperature (°C)	536.7
Critical pressure (Pa)	4207000
Surface tension (mN/m)	24.6 [mN/m] at a temperature of 20°C 23.97 [mN/m] at a temperature of 25°C
Vapour Pressure (Pa)	12300 [Pa] at a temperature of 20°C 12079 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	230
Flash Point (°C)	-6
Flash Point (Pensky-Martens closed cup) (°C)	-2

Flash Point (Cleveland open cup) (°C)	1
Lower explosivity limit (LEL) (volume %)	2.47
Upper explosivity limit (UEL) (volume %)	10.6
Vapor enthalpy (J/Kg)	434059 [J/Kg] at a temperature of 79.6°C 482457 [J/Kg] at a temperature of 25°C
Combust enthalpy (J/Kg)	32700000
Specific heat capacity (J/(Kg·K))	2200.8
Combustion efficiency (%)	96
Mass flow rate of the combustion surface (Kg/(m ² ·s))	0.07
Rad fraction (%)	28
Henry's constant (mol/(m ³ ·Pa))	5.83

Behaviour at sea

Log kow	0.29
Log koc	0.55
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Biodegradation in marine environment (Half-life) (days)	10
Bioconcentration factor (BCF)	0.98

Additional data

Colour	colourless				
Odour	pungent odour				
MARPOL pollution category	<table border="1"> <thead> <tr> <th>Category</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Z</td> <td>Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment.</td> </tr> </tbody> </table>	Category	Description	Z	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment.
Category	Description				
Z	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment.				
Standard behavior classification	DE				

Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	19
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	under pressure
Family name	aldehydes
IMO class	3.2

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	No
Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	3 - Corrosive
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	DE - Dissolver/Evaporator
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



IDHL	300	
Hazard statements	Physical	
	H225	Highly flammable liquid and vapour.
	Health	
	H319	Causes serious eye irritation.
	H336	May cause drowsiness or dizziness.

Precautionary statements	General
	P102 Keep out of reach of children.
	Prevention
	P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
	P233 Keep container tightly closed.
	P240 Ground/bond container and receiving equipment.
	P241 Use explosion-proof electrical/ventilating/lighting/.../equipment.
	P242 Use only non-sparking tools.
	P243 Take precautionary measures against static discharge.
	P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
	P264 Wash ... thoroughly after handling.
	P271 Use only outdoors or in a well-ventilated area.
	P280 Wear protective gloves/protective clothing/eye protection/face protection.
	Response
	P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
	P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P312 Call a POISON CENTER or doctor/physician if you feel unwell.
	P337 + P313 If eye irritation persists: Get medical advice/attention.
	P370 + P378 In case of fire: Use ... for extinction.
	Storage
	P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
	P405 Store locked up.
	Disposal
	P501 Dispose of contents/container to ...

TEEL-1 (mg/m3)	0.06 ppm
TEEL-2 (mg/m3)	0.4 ppm
TEEL-3 (mg/m3)	12.5 ppm

Ecotoxicity

Lowest median lethal concentration (LC50) on crustacean (mg/l)	1382
Lowest median lethal concentration (LC50) on fishes (mg/l)	1656

Highest no observed effect concentration (NOEC) on fishes (mg/l)	1170
Assessment factor (AF)	1 on the short term
Predicted No Effect Concentration (PNEC) (µg/l)	55.8 [µg/l] on the short term

BUTYROLACTONE

Also known as: BUTYRIC ACID LACTONE, gamma-BUTYROLACTONE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1050/1130 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	86.1
Boiling Point (°C)	204/206
Melting Point (°C)	-44
Vapour Pressure (Pa)	150 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	455
Flash Point (°C)	98
Lower explosivity limit (LEL) (volume %)	0.3
Upper explosivity limit (UEL) (volume %)	16

Behaviour at sea

Additional data

Transportation data

Reactivity data

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - $e < 1$, or $> ca. 7$, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible

Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	0 - Not irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Specific Health Concern (D3)	C - Carcinogenicity
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TEEL-2 (mg/m3)	40
TEEL-3 (mg/m3)	500

Ecotoxicity

CACODYLIC ACID

UN Number: 1572

Also known as: ACIDE CACODYLIQUE, AGENT BLUE (T), ANSAR (T), ARSAN (T), ARSINE OXIDE, DIMETHYLHYDROXY-, CHEXMATE (T), DIMETHYLARSINIC ACIDE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1572

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m³)	1100 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	138
Boiling Point (°C)	200

Behaviour at sea

Persistence (days) 1.6

Additional data

Colour	colourless, dyed blue
Odour	odourless
Standard behavior classification	D,SD, S

Transportation data

Package group	II
State	solid
Temperature (°C)	ambient
Pressure (Pa)	ambient
IMO class	6.1

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m3)

1.5

Ecotoxicity

CADMIUM CHLORIDE

UN Number: 2570

Also known as: CADDY, CHLORURE DE CADMIUM

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 2570

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	3327 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	228.35
Boiling Point (°C)	960
Melting Point (°C)	568

Behaviour at sea

Additional data

Colour	white
Odour	odourless
Marine pollutant	P
Standard behavior classification	SD

Transportation data

Transport mode	Bulk, Packaged
State	cryst. solid
IMO class	6.1

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

TLV-TWA	0.007
TEEL-1 (mg/m3)	0.0489
TEEL-2 (mg/m3)	0.5
TEEL-3 (mg/m3)	14.7

Ecotoxicity

CAESIUM

UN Number: 1407

Also known as: CESIUM

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number 1407

Physical chemical data

Physical State (20°C)	Solid
Molar mass (g/mol)	132.91

Behaviour at sea

Additional data

Transportation data

State	solid
Temperature (°C)	ambient
Pressure (Pa)	ambient
IMO class	4.3

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m3)	20
TEEL-2 (mg/m3)	150
TEEL-3 (mg/m3)	500

Ecotoxicity

CALCIUM ALKYL PHENOL SULPHIDE

polyolefin phosphorosulphide mixture (LOA)

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Liquid/Solid
Density (kg/m ³)	945 [Kg/m ³] at a temperature of 20°C
Vapour Pressure (Pa)	400 [Pa] at a temperature of 20°C
Flash Point (°C)	177

Behaviour at sea

Additional data

Standard behavior classification	FED
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Transportation data

Reactivity data

GESAMP Hazard profile

Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible

Human toxicity threshold

Ecotoxicity

CALCIUM ARSENATE

UN Number: 1573

Also known as: ARSENIATE DE CALCIUM, CUCUMBER DUST (T)

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1573

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	3620 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	398
Melting Point (°C)	1455

Behaviour at sea

Persistence (days) 1.6

Additional data

Colour	white
Odour	odourless
Standard behavior classification	D, SD, S

Transportation data

Package group	II
State	solid
Temperature (°C)	ambient
Pressure (Pa)	ambient
IMO class	6.1

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

TLV-TWA	0.0006
TEEL-1 (mg/m3)	1.5
TEEL-2 (mg/m3)	10
TEEL-3 (mg/m3)	13.3

Ecotoxicity

CALCIUM CARBIDE

UN Number: 1402

Also known as: ACETHYLENOGEN, CALCIUM ACETYLIDE, CARBURE DE CALCIUM

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1402

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	2220 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	64.1
Melting Point (°C)	2300

Behaviour at sea

Additional data

Colour	grey to blue-black
Odour	garlic odour
Standard behavior classification	D,SD

Transportation data

Package group	II
State	solid
Temperature (°C)	ambient
Pressure (Pa)	ambient
IMO class	4.3

Reactivity data

Water	Yes
Acid(s)	Yes
Base(s)	No
Metal(s) and alloys	No

Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m3)	30
TEEL-2 (mg/m3)	50
TEEL-3 (mg/m3)	250

Ecotoxicity

CALCIUM CARBONATE slurry

CAS Number: 471-34-1

Also known as: CARBONATE DE CALCIUM boue, CARBONIC ACID CALCIUM SALT, CHALK

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 471-34-1

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	2900 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	100.1
Boiling Point (°C)	825

Behaviour at sea

Additional data

Colour	white, gray
Odour	odourless

Transportation data

State solid

Reactivity data

Water	No
Acid(s)	Yes

GESAMP Hazard profile

Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible

Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	0 - Not irritating
Eye irritation/corrosivity (D2)	0 - Not irritating
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly
Effects on wildlife and bottom habitats (E3)	0 - Is not a floater; and does not pose any known health hazards

Human toxicity threshold

TLV-TWA	2.4
TEEL-1 (mg/m3)	45
TEEL-2 (mg/m3)	500
TEEL-3 (mg/m3)	500

Ecotoxicity

CALCIUM CHLORIDE

Also known as: CALCIUM DICHLORIDE, CALPUS (T), CALTAC (T), CHLORUREDECALCIUM, DOWFLAKE (T)

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	2100 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	110.99
Boiling Point (°C)	1600
Melting Point (°C)	772

Behaviour at sea

Additional data

Colour	white to off-white
Odour	odourless
Standard behavior classification	SD

Transportation data

State	solid, solut.
Temperature (°C)	ambient
Pressure (Pa)	ambient

Reactivity data

Water	No
Acid(s)	No
Base(s)	No
Metal(s) and alloys	Yes
Oxidizing agents	No
Reducing agents	No
Combustibles	No

GESAMP Hazard profile

Human toxicity threshold

Ecotoxicity

CALCIUM CHLORITE

UN Number: 1453

Also known as: CHLORITE DE CALCIUM

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1453

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	2700 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	243
Melting Point (°C)	100

Behaviour at sea

Additional data

Standard behavior classification SD

Transportation data

Package group	II
State	solid
IMO class	5.1

Reactivity data

Water	No
Acid(s)	No
Base(s)	No
Metal(s) and alloys	Yes
Oxidizing agents	No
Reducing agents	No
Combustibles	Yes
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

Ecotoxicity

CALCIUM HYDRIDE

UN Number: 1404

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1404

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	1900 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	41.1
Density of gas (kg/m ³)	1900
Melting Point (°C)	675

Behaviour at sea

Additional data

Standard behavior classification D,SD

Transportation data

State	solid
IMO class	4.3

Reactivity data

Water	Yes
Acid(s)	Yes
Base(s)	No
Metal(s) and alloys	No
Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

TEEL-2 (mg/m3)	35
TEEL-3 (mg/m3)	150

Ecotoxicity

CALCIUM HYDROXIDE

CAS Number: 1305-62-0

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 1305-62-0

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	2240 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	74.09

Behaviour at sea

Additional data

Colour	white
Odour	odourless
Standard behavior classification	D, SD, S

Transportation data

State solid, solut.

Reactivity data

GESAMP Hazard profile

Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	2 - Irritating

Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

TLV-TWA	1.5
TEEL-1 (mg/m3)	15
TEEL-2 (mg/m3)	500
TEEL-3 (mg/m3)	500

Ecotoxicity

CALCIUM HYPOCHLORITE dry or mixtures(>39% avail. chlorine)

UN Number: 1748 - CAS Number: 8061-52-7

Also known as: BLEACHING POWDER, CAL HYPO, CHLORINATED LIME, CHLOROX (T), Lignosulfonic Acid, Calcium Salt, Calcium 3-(2-Hydroxy-3-Methoxyphenyl)-2-[2-Methoxy-4-(3-Sulfonatopropyl)Phenoxy]Propane-1-Sulfonate, Calcium Lignosulphonate Solutions, Solutions De Lignosulfonate De Calcium

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1748
CAS number	8061-52-7
Formula	C ₂₀ H ₂₄ CaO ₁₀ S ₂

Physical chemical data

Physical State (20°C)	Solid
Physical State (25°C)	Liquid
Mixed	Yes
Density (kg/m ³)	2300 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	174.98
Solubility (g/L)	10000000 [g/L] at a temperature of 20°C and salinity of 0‰
Melting Point (°C)	100

Behaviour at sea

Persistence (days)	1.6
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Additional data

Colour	white
Odour	bleaching liquid odour

MARPOL pollution category	Category	Description
	Other Substances	Substances which have been evaluated and found to fall outside Category X, Y or Z because they are considered to present no harm to marine resources, human health, amenities or other legitimate uses of the sea when discharged into the sea from tank cleaning of deballasting operations. The discharge of bilge or ballast water or other residues or mixtures containing these substances are not subject to any requirements of MARPOL Annex II.
Standard behavior classification	D, SD	

Transportation data

Transport mode	Bulk, Packaged
Package group	II
State	solid
IMO class	5.1

Reactivity data

Water	No
Abilities	Solution.
Acid(s)	No
Base(s)	No
Metal(s) and alloys	Yes
Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	5 - Very highly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury

Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

Hazard statements	Environmental	
	H413	May cause long lasting harmful effects to aquatic life.
TEEL-1 (mg/m3)	10	
TEEL-2 (mg/m3)	75	
TEEL-3 (mg/m3)	350	

Ecotoxicity

CALCIUM LIGNOSULPHATE solutions

CAS Number: 8061-52-7

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 8061-52-7

Physical chemical data

Physical State (20°C) Liquid

Density (kg/m³) 1260/1280 [Kg/m³] at a temperature of 20°C

Behaviour at sea

Additional data

Colour brown

Odour slight

Standard behavior classification D/DE

Transportation data

State liquid

Reactivity data

Water No

GESAMP Hazard profile

Bioaccumulation in BCF (A1B) 0 - No measurable BCF

Bioaccumulation (A1) 0 - No potential to bioaccumulate

Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l)) 5 - Very highly toxic

Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg)) 1 - Slight

Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg)) 0 - Negligible

Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l)) 2 - Moderate

Eye irritation/corrosivity (D2) 3 - Severely irritating, with irreversible corneal injury

Interference with coastal amenities (E2) D - Dissolver

Effects on wildlife and bottom habitats (E3)

3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

Ecotoxicity

CALCIUM NITRATE (40-50% aqueous solution)

UN Number: 1454 - CAS Number: 10124-37-5

Also known as: CALCIUM (II) NITRATE, Calcium Dinitrate, Lime Nitrate, Calcium Nitrate Solutions (50% Or Less), Solution De Nitrate De Calcium (50% Ou Moins)

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1454
CAS number	10124-37-5
Formula	Ca(NO ₃) ₂

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Mixed	Yes
Density (kg/m ³)	2500 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	164.1
Solubility (g/L)	10000000 [g/L] at a temperature of 20°C and salinity of 0‰
Boiling Point (°C)	115
Melting Point (°C)	560

Behaviour at sea

Additional data

Colour	colourless to slightly yellow
Odour	odourless

MARPOL pollution category	Category	Description
	Z	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment.

Standard behavior classification	D/DE
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Transportation data

Package group	III
State	liquid
IMO class	5.1

Reactivity data

Water	No
Abilities	Solution.
Acid(s)	Yes
Reducing agents	Yes
Combustibles	Yes

GESAMP Hazard profile

Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	1 - Is a floater; and/or is slightly acutely toxic; and/or is mildly irritant to skin and/or eyes

Human toxicity threshold



Hazard statements	Health
	H302 Harmful if swallowed.
	H318 Causes serious eye damage.
Precautionary statements	Prevention
	P264 Wash ... thoroughly after handling.
	P270 Do not eat, drink or smoke when using this product.
	P280 Wear protective gloves/protective clothing/eye protection/face protection.
	Response
	P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P310 Immediately call a POISON CENTER or doctor/physician.
	P330 Rinse mouth.
TEEL-1 (mg/m3)	3.5
TEEL-2 (mg/m3)	25
TEEL-3 (mg/m3)	125

Ecotoxicity

CALCIUM PERMANGANATE

UN Number: 1456

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1456

Physical chemical data

Physical State (20°C) Solid

Density (kg/m³) 2400 [Kg/m³] at a temperature of 20°C

Behaviour at sea

Additional data

Standard behavior classification SD

Transportation data

Package group II

State solid

IMO class 5.1

Reactivity data

Water No

Acid(s) No

Base(s) No

Metal(s) and alloys No

Oxidizing agents No

Reducing agents No

Combustibles No

Organic substance No

GESAMP Hazard profile

Human toxicity threshold

Ecotoxicity

CAMPHOR OIL

UN Number: 1130

Also known as: CAMPHOR LINIMENT (T), HUILE DE CAMPHRE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1130

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	923 [Kg/m ³] at a temperature of 20°C
Boiling Point (°C)	200

Behaviour at sea

Persistence (days) 1.6

Additional data

Colour	colourless, brown, blue
Odour	penetrating, camphor odour
Standard behavior classification	D, FD, F

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	18
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	ketones
IMO class	7-Mar

Reactivity data

Acid(s) Yes

Base(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Human toxicity threshold

IDHL	30
TLV-TWA	0.3

Ecotoxicity

CAPROLACTAM liquid

CAS Number: 105-60-2

Also known as: AMINOCAPROIC LACTAM, 6-AMINOHEXANOIC ACID LACTAM, CAPROLACTAME liquide

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 105-60-2

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	1020 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	113
Density of gas (kg/m ³)	5.031
Boiling Point (°C)	268
Melting Point (°C)	69
Vapour Pressure (Pa)	373 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	375
Flash Point (°C)	110
Lower explosivity limit (LEL) (volume %)	1.84

Behaviour at sea

Additional data

Colour	colourless
Odour	mild odour
Standard behavior classification	FD

Transportation data

Cargo group	22
State	liquid
Temperature (°C)	75 - 24
Pressure (Pa)	under pressure
Family name	caprolactam solution

Reactivity data

Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TEEL-3 (mg/m3) 20

Ecotoxicity

CARBARYL

UN Number: 2757

Also known as: ARYLAM, CARBATOX, CARPOLIN AND OTHERS

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number 2757

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	1200 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	201
Melting Point (°C)	142
Vapour Pressure (Pa)	negligible [Pa] at a temperature of 20°C

Behaviour at sea

Persistence (days) 3.1

Additional data

Colour	white to grey
Odour	weak odour

Transportation data

Transport mode	Bulk, Packaged
Package group	III
State	solid
IMO class	6.1

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

IDHL	70
TLV-TWA	0.6
TEEL-2 (mg/m3)	15
TEEL-3 (mg/m3)	100

Ecotoxicity

CARBOLIC OIL (mixture)

UN Number: 2821

Also known as: CARBOLIC ACID

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 2821

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1040 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	94.11
Boiling Point (°C)	181.8
Melting Point (°C)	41
Vapour Pressure (Pa)	82.7 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	715
Flash Point (°C)	79.4
Lower explosivity limit (LEL) (volume %)	1.7
Upper explosivity limit (UEL) (volume %)	8.6

Behaviour at sea

Additional data

Colour	darkens with light
Odour	sweet tar

Transportation data

Transport mode	Bulk, Packaged
Package group	II/III
Cargo group	21
State	liquid
Temperature (°C)	ambient
Family name	phenols, cresols

IMO class	6.1
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Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	3 - ≥ 3 and < 4
Bioaccumulation in BCF (A1B)	3 - ≥ 100 and < 500
Bioaccumulation (A1)	3 - Moderate potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	1 - Low
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	FED - Floater/Evaporator/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

IDHL	250
ERPG-1 (ppm)	10
ERPG-2 (ppm)	50
ERPG-3 (ppm)	200

Ecotoxicity

CARBON DISULPHIDE

UN Number: 1131 - CAS Number: 75-15-0

Also known as: CARBON BISULFIDE, CARBON BISULPHIDE, DISULPHURE DE CARBONE, Carbonbisulfide, Carbon Disulphide, Disulfure De Carbone

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1131
CAS number	75-15-0
Formula	CS ₂

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	1260 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	0.2874 [cSt] at a temperature of 20°C 0.279 [cSt] at a temperature of 25°C
Molar mass (g/mol)	76.14
Density of gas (kg/m ³)	3.354
Solubility (g/L)	2000 [g/L] at a temperature of 20°C and salinity of 0‰ 2160 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	46
Melting Point (°C)	-110
Critical molar volume (m ³ /mol)	0.000173
Critical temperature (°C)	552
Critical pressure (Pa)	7900000
Surface tension (mN/m)	32.25 [mN/m] at a temperature of 20°C 31.58 [mN/m] at a temperature of 25°C
Vapour Pressure (Pa)	40520 [Pa] at a temperature of 20°C 57328 [Pa] at a temperature of 30°C
Ignition Temperature (°C)	100
Flash Point (°C)	-30
Flash Point (Pensky-Martens closed cup) (°C)	-30
Lower explosivity limit (LEL) (volume %)	1.3

Upper explosivity limit (UEL) (volume %)	44
Vapor enthalpy (J/Kg)	352109 [J/Kg] at a temperature of 46°C 337667 [J/Kg] at a temperature of 25°C
Combustion enthalpy (J/Kg)	17756763
Specific heat capacity (J/(Kg·K))	1003
Henry's constant (mol/(m ³ ·Pa))	1459.1

Behaviour at sea

Persistence (days)	3.1
Log K _{ow}	1.84
Log K _{oc}	1.34
Biodegradation in estuary environment (Half-life) (days)	400

Additional data

Colour	colourless to yellow	
Odour	rotten egg to sweet odour	
MARPOL pollution category	Category	Description
	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.

Transportation data

Transport mode	Bulk, Packaged
Cargo group	38
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	under pressure
Family name	carbon disulfide
IMO class	3.1

Reactivity data

Base(s)	Yes
Static electricity	Yes

GESAMP Hazard profile

Bioaccumulation in logP _{ow} (A1A)	2 - ≥2 and <3
Bioaccumulation in BCF (A1B)	1 - ≥1 and <10
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate

Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	3 - Moderately high
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	4 - High
Skin irritation/corrosivity (D1)	3A - Corrosive
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	SD - Sinker/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



IDHL	500
Hazard statements	<p>Physical</p> <p>H225 Highly flammable liquid and vapour.</p> <p>Health</p> <p>H319 Causes serious eye irritation.</p> <p>H332 Harmful if inhaled.</p> <p>H361 Suspected of damaging fertility or the unborn child.</p> <p>H372 Causes damage to organs through prolonged or repeated exposure, exposure cause the hazard:</p>

Precautionary statements**Prevention**

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
- P233 Keep container tightly closed.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting/.../equipment.
- P243 Take precautionary measures against static discharge.
- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
- P264 Wash ... thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P271 Use only outdoors or in a well-ventilated area.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P281 Use personal protective equipment as required.

Response

- P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P308 + P313 IF exposed or concerned: Get medical advice/attention.
- P312 Call a POISON CENTER or doctor/physician if you feel unwell.
- P314 Get medical advice/attention if you feel unwell.
- P337 + P313 If eye irritation persists: Get medical advice/attention.

ERPG-2 (ppm)	50
ERPG-3 (ppm)	500

Ecotoxicity

Lowest median lethal concentration (LC50) on crustacean (mg/l)	2.1
Lowest median lethal concentration (LC50) on fishes (mg/l)	2.99
Highest no observed effect concentration (NOEC) on fishes (mg/l)	135
Assessment factor (AF)	1000 on the short term
Predicted No Effect Concentration (PNEC) (µg/l)	1 [µg/l] on the short term

CARBON TETRACHLORIDE

UN Number: 1846

Also known as: CARBON TET

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1846

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1590 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	153.83
Density of gas (kg/m ³)	7.095
Boiling Point (°C)	76
Melting Point (°C)	-23
Vapour Pressure (Pa)	11997 [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Colour	colourless
Odour	sweet odour

Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	36
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	under pressure
Family name	halogenated hydrocarb
IMO class	6.1

Reactivity data

GESAMP Hazard profile

Biodegradation (A2)

NR - Not readily biodegradable

Human toxicity threshold

IDHL	300
ERPG-1 (ppm)	20
ERPG-2 (ppm)	100
ERPG-3 (ppm)	750

Ecotoxicity

CELLULOID (scrap)

UN Number: 2002

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 2002

Physical chemical data

Physical State (20°C) Solid

Behaviour at sea

Additional data

Transportation data

Package group	III
State	solid
IMO class	4.2

Reactivity data

Water	No
Acid(s)	No
Base(s)	No
Metal(s) and alloys	No
Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

Ecotoxicity

CETYL EICOSYL METHACRYLATE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	860 [Kg/m ³] at a temperature of 20°C
Boiling Point (°C)	370
Melting Point (°C)	< 0/20
Vapour Pressure (Pa)	very low [Pa] at a temperature of 20°C
Flash Point (°C)	149

Behaviour at sea

Additional data

Colour	clear to brownish
Odour	mild sweet

Transportation data

Cargo group	14
State	liquid

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic

Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	Fp - Persistent slick forming substance
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

CHLORINE

UN Number: 1017

Also known as: BERTHOLITE, CHLORE

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number 1017

Physical chemical data

Physical State (20°C)	Gas
Density (kg/m ³)	3.225 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	70.91
Density of gas (kg/m ³)	3.225
Boiling Point (°C)	-34
Melting Point (°C)	-101
Vapour Pressure (Pa)	680000 [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Colour	greenish yellow
Odour	irritat., choking, bleaching

Transportation data

Transport mode	Gas, Packaged
Ship type	1G
State	liq.compr.gas
Temperature (°C)	ambient
Pressure (Pa)	under pressure
IMO class	2(2.3)

Reactivity data

Water	No
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Acid(s)	No
Base(s)	No
Metal(s) and alloys	Yes
Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

IDHL	30				
TLV-TWA	0.5				
ERPG-3 (ppm)	20				
		10 min	30 min	60 min	4 hrs
AEGL-1 (ppm)	0.5	0.5	0.5	0.5	0.5
AEGL-2 (ppm)	2.8	2.8			0.7
AEGL-3 (ppm)	50	28	20	10	7.1

Ecotoxicity

CHLOROACETIC ACID solid

UN Number: 1751 - CAS Number: 79-11-8

Also known as: ACIDE CHLOROACETIQUE solide, CHLOROACETIC ACID, CHLOROETHANOIC ACID, Monochloroacetic Acid, Chloroacetic Acid Solutions, Solutions D'Acide Chloroacetique

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1751
CAS number	79-11-8
Formula	C ₂ H ₃ ClO ₂

Physical chemical data

Physical State (20°C)	Solid
Physical State (25°C)	Liquid
Density (kg/m ³)	1580 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	94.5
Density of gas (kg/m ³)	4.26
Solubility (g/L)	10000000 [g/L] at a temperature of 20°C and salinity of 0‰
Boiling Point (°C)	188
Melting Point (°C)	57
Vapour Pressure (Pa)	130 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	470
Flash Point (°C)	126

Behaviour at sea

Additional data

Colour	white to brown
Odour	strong vinegar-like

MARPOL pollution category	Category	Description
	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.

Transportation data

Transport mode	Bulk, Packaged
Package group	II
State	solid
Temperature (°C)	ambient
IMO class	6.1

Reactivity data

Water	No
Abilities	Solution.
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	Yes
Oxidizing agents	Yes
Combustibles	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - $e < 1$, or $> ca. 7$, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	3 - Moderately high
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	4 - High
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver

Human toxicity threshold



Hazard statements	Physical	
	H290	May be corrosive to metals.
	Health	
	H301	Toxic if swallowed.
	H311	Toxic in contact with skin.
	H314	Causes severe skin burns and eye damage.
	H331	Toxic if inhaled.
	H335	May cause respiratory irritation.
	Environmental	
	H410	Very toxic to aquatic life with long lasting effects.
Precautionary statements	Prevention	
	P234	Keep only in original container.
	P260	Do not breathe dust/fume/gas/mist/vapours/spray.
	P273	Avoid release to the environment.
	P280	Wear protective gloves/protective clothing/eye protection/face protection.
	Response	
	P301 + P330 + P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
	P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
	P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P309 + P311	IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.
	P390	Absorb spillage to prevent material damage.
	Storage	
	P406	Store in corrosive resistant/... container with a resistant inner liner.
	Disposal	
	P501	Dispose of contents/container to ...
TEEL-1 (mg/m3)	1.5 ppm	
TEEL-2 (mg/m3)	6.6 ppm	
TEEL-3 (mg/m3)	20 ppm	

Ecotoxicity

CHLOROBENZENE

UN Number: 1134 - CAS Number: 108-90-7

Also known as: BENZENE CHLORIDE, CHLOROBENZOL

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number	1134
CAS number	108-90-7

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1110 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	112.56
Density of gas (kg/m ³)	5.005
Boiling Point (°C)	132
Melting Point (°C)	-45
Vapour Pressure (Pa)	1200 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	660
Flash Point (°C)	28
Lower explosivity limit (LEL) (volume %)	1.3
Upper explosivity limit (UEL) (volume %)	7.1

Behaviour at sea

Additional data

Colour	colourless
Odour	sweet, almond odour

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	36
State	liquid

Temperature (°C)	ambient
Pressure (Pa)	under pressure
Family name	halogenated hydrocarb
IMO class	3.3

Reactivity data

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	2 - ≥ 2 and < 3
Bioaccumulation in BCF (A1B)	2 - ≥ 10 and < 100
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	0 - Not irritating
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

IDHL	2400
TLV-TWA	75
TEEL-1 (mg/m3)	10 ppm
TEEL-2 (mg/m3)	150 ppm
TEEL-3 (mg/m3)	400 ppm

Ecotoxicity

CHLOROFORM

UN Number: 1888 - CAS Number: 67-66-3

Also known as: CHLOROFORME, Formyl Trichloride, Methane Trichloride, Methenyl Trichloride, Methyl Trichloride, Trichloroform, Trichloromethane, Chloroform

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1888
CAS number	67-66-3
Formula	CHCl ₃

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	1490 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	0.38 [cSt] at a temperature of 20°C 0.36 [cSt] at a temperature of 25°C
Molar mass (g/mol)	119.39
Density of gas (kg/m ³)	5.289
Solubility (g/L)	8220 [g/L] at a temperature of 20°C and salinity of 0‰ 7950 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	61
Melting Point (°C)	-63
Critical molar volume (m ³ /mol)	0.000239
Critical temperature (°C)	536.4
Critical pressure (Pa)	5470000
Surface tension (mN/m)	27.14 [mN/m] at a temperature of 20°C 26.67 [mN/m] at a temperature of 25°C
Interfacial tension (mN/m)	32.8 [mN/m] at a temperature of 20°C and salinity of 0‰
Vapour Pressure (Pa)	20260 [Pa] at a temperature of 20°C 26000 [Pa] at a temperature of 25°C
Vapor enthalpy (J/Kg)	244.93 [J/Kg] at a temperature of 61.3°C 279364 [J/Kg] at a temperature of 25°C
Combustion enthalpy (J/Kg)	3180000

Specific heat capacity (J/(Kg·K))	956.6
Combustion efficiency (%)	50
Mass flow rate of the combustion surface (Kg/(m ² ·s))	0.02
Rad fraction (%)	40
Henry's constant (mol/(m ³ ·Pa))	371

Behaviour at sea

Log kow	1.97
Log koc	1.5
Aqueous photolysis (Half-life)	22
Biodegradation in estuary environment (Half-life) (days)	450
Biodegradation in marine environment (Half-life) (days)	Not biodegradable
Bioconcentration factor (BCF)	12.7

Additional data

Colour	colourless
Odour	sweet odour

MARPOL pollution category	Category	Description
	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.

Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	36
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	halogenated hydrocarb
IMO class	6.1

Reactivity data

Notable risks	Reacts violently with strong bases, strong oxidants and some metals such as aluminium, magnesium and zinc.
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GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥1 and <2
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Bioaccumulation in BCF (A1B)	1 - ≥ 1 and < 10
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	SD - Sinker/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



IDHL	1000
Hazard statements	Health
	H302 Harmful if swallowed.
	H315 Causes skin irritation.
	H319 Causes serious eye irritation.
	H331 Toxic if inhaled.
	H351 Suspected of causing cancer.
	H361 Suspected of damaging fertility or the unborn child.
	H372 Causes damage to organs through prolonged or repeated exposure, exposure cause the hazard:

Precautionary statements	Prevention
	P202 Do not handle until all safety precautions have been read and understood.
	P260 Do not breathe dust/fume/gas/mist/vapours/spray.
	P280 Wear protective gloves/protective clothing/eye protection/face protection.
	Response
	P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P308 + P313 IF exposed or concerned: Get medical advice/attention.
	Storage
	P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
	Disposal
	P501 Dispose of contents/container to ...

ERPG-2 (ppm)	50
ERPG-3 (ppm)	5000

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	13.3
Lowest median lethal concentration (LC50) on crustacean (mg/l)	29
Lowest median lethal concentration (LC50) on fishes (mg/l)	18
Highest no observed effect concentration (NOEC) on algae (mg/l)	3.61
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	6.3
Highest no observed effect concentration (NOEC) on fishes (mg/l)	1.463
Assessment factor (AF)	50 on the short term 10 on the long term
Predicted No Effect Concentration (PNEC) (µg/l)	266 [µg/l] on the short term 146 [µg/l] on the long term

CHLOROHYDRINS

CAS Number: 96-24-2

Also known as: CHLOROHYDRINES, CHLOROPROPANE DIOLS, CHLOROPROPYLENE GLYCOLS, CRUDE EPICHLOROHYDRIN

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 96-24-2

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m³)	1180 [Kg/m ³] at a temperature of 20°C
Vapour Pressure (Pa)	786 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	428
Flash Point (°C)	33.3
Lower explosivity limit (LEL) (volume %)	3.8
Upper explosivity limit (UEL) (volume %)	21

Behaviour at sea

Additional data

Colour	colourless to pale yellow
Odour	pungent, garlic-like
Standard behavior classification	SD/D

Transportation data

Cargo group	17
State	liquid
Temperature (°C)	ambient
Family name	epichlorohydrin

Reactivity data

Water	Yes
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Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Skin irritation/corrosivity (D1)	3A - Corrosive
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Specific Health Concern (D3)	C - Carcinogenicity
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

IDHL	75
TLV-TWA	0.5
ERPG-2 (ppm)	20
ERPG-3 (ppm)	100

Ecotoxicity

CHLOROSULFONIC ACID (with or without SO3)

UN Number: 1754

Also known as: ACIDE CHLOROSULFONIQUE (avec ou sans SO3), CHLOROSULFURIC ACID

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1754

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1750 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	116.53
Density of gas (kg/m ³)	5.16
Boiling Point (°C)	155
Melting Point (°C)	-80
Vapour Pressure (Pa)	130 [Pa] at a temperature of 20°C

Behaviour at sea

Persistence (days) 0.8

Additional data

Colour	colourless to light yellow
Odour	sharp, choking odour
Standard behavior classification	D, SD

Transportation data

State	liquid
Temperature (°C)	ambient
Pressure (Pa)	under pressure

Reactivity data

Water	Yes
Acid(s)	No
Base(s)	No
Metal(s) and alloys	Yes
Oxidizing agents	No
Reducing agents	No
Combustibles	Yes
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

ERPG-2 (ppm)	10
ERPG-3 (ppm)	30

Ecotoxicity

CHOLINE CHLORIDE solutions

CAS Number: 67-48-1

Also known as: BICOLINA, CHLORURE DE CHOLINE en solution, CHOLINE CHLOROHYDRATE, CHOLINE HYDROCHLORID, CHOLINIUM CHLORIDE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 67-48-1

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m³)	1100 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	139.65 (solid)
Boiling Point (°C)	100
Melting Point (°C)	305
Vapour Pressure (Pa)	2400 [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Colour	white
Odour	odourless

Transportation data

Reactivity data

Water No

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic

Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Eye irritation/corrosivity (D2)	0 - Not irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	0 - Is not a floater; and does not pose any known health hazards

Human toxicity threshold

Ecotoxicity

CHROMIUM TRIOXIDE anhydrous

UN Number: 1463

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1463

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	2700 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	99.99
Melting Point (°C)	197

Behaviour at sea

Additional data

Colour	dark red
Odour	odourless

Transportation data

Package group	II
State	solid
IMO class	5.1

Reactivity data

Metal(s) and alloys	No
Oxidizing agents	No
Reducing agents	Yes
Combustibles	Yes
Organic substance	Yes

GESAMP Hazard profile

Human toxicity threshold

TLV-TWA	0.012
TEEL-1 (mg/m3)	0.00962
TEEL-2 (mg/m3)	0.06
TEEL-3 (mg/m3)	28.8

Ecotoxicity

CITRIC ACID

Also known as: ACIDE CITRIQUE, ACILETTEN (T), CITRETTEN (T), CITRO (T)

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	1700 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	192.1
Melting Point (°C)	153
Flash Point (°C)	100
Lower explosivity limit (LEL) (volume %)	0.28
Upper explosivity limit (UEL) (volume %)	2.29

Behaviour at sea

Additional data

Colour	white
Odour	odourless
Standard behavior classification	SD

Transportation data

State	solid
Temperature (°C)	ambient
Pressure (Pa)	ambient

Reactivity data

Water	No
Acid(s)	No
Base(s)	No
Metal(s) and alloys	No
Oxidizing agents	No

Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TEEL-1 (mg/m3)	35
TEEL-2 (mg/m3)	250
TEEL-3 (mg/m3)	500

Ecotoxicity

CLAY

Also known as: ALUMINIUM SILICATEHYDROXIDE, ARGILE, BALL CLAY, BENTONITE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C) Solid

Behaviour at sea

Additional data

Transportation data

State solid

Reactivity data

Water No

GESAMP Hazard profile

Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	0 - Not irritating
Eye irritation/corrosivity (D2)	0 - Not irritating
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly
Effects on wildlife and bottom habitats (E3)	0 - Is not a floater; and does not pose any known health hazards

Human toxicity threshold

Ecotoxicity

COAL TAR

UN Number: 3082 - CAS Number: 8007-45-2

Also known as: CARBO-CORT, CRUDE COAL TAR

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	3082
CAS number	8007-45-2

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1160/1220 [Kg/m ³] at a temperature of 20°C
Boiling Point (°C)	105/355
Flash Point (°C)	125

Behaviour at sea

Additional data

Colour	black
Odour	odourless

Transportation data

Package group	III
State	liquid

Reactivity data

Water	No
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	4 - ≥ 4 and < 5
Bioaccumulation in BCF (A1B)	4 - ≥ 500 and < 4000
Bioaccumulation (A1)	4 - High potential to bioaccumulate

Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	1 - Low
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

Ecotoxicity

COAL TAR NAPHTA SOLVENT

UN Number: 2553 - CAS Number: 8030-30-6

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2553
CAS number	8030-30-6

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	870 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	107.3
Density of gas (kg/m ³)	4.79
Boiling Point (°C)	125/200
Melting Point (°C)	< 15
Vapour Pressure (Pa)	400 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	277
Flash Point (°C)	15
Lower explosivity limit (LEL) (volume %)	0.8
Upper explosivity limit (UEL) (volume %)	6.1

Behaviour at sea

Additional data

Colour	colourless to pale yellow
Odour	gasoline-like
Standard behavior classification	FE

Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	33
State	liquid
Family name	miscell. hydroc. mixt

IMO class	3.2
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Reactivity data

Water	No
Acid(s)	Yes
Base(s)	No
Metal(s) and alloys	No
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	3 - ≥ 3 and < 4
Bioaccumulation (A1)	3 - Moderate potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	FE - Floater/Evaporator
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

IDHL	10000
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Ecotoxicity

COAL TAR PITCH

UN Number: 1136 - CAS Number: 65996-93-2

Also known as: BRAI DE GOUDRON DE HOUILLE

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number	1136
CAS number	65996-93-2

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	> 1100 [Kg/m ³] at a temperature of 20°C
Density of gas (kg/m ³)	> 1.29
Boiling Point (°C)	> 250
Melting Point (°C)	38/50
Vapour Pressure (Pa)	<10 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	>500
Flash Point (°C)	>200

Behaviour at sea

Additional data

Colour	black
Odour	tar-like

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	33
Temperature (°C)	ambient
Family name	miscell. hydroc. mixt

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	3 - ≥ 3 and < 4
Bioaccumulation in BCF (A1B)	3 - ≥ 100 and < 500
Bioaccumulation (A1)	3 - Moderate potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	2 - Moderate
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Eye irritation/corrosivity (D2)	0 - Not irritating
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

Ecotoxicity

COD LIVER OIL

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C) Liquid

Behaviour at sea

Additional data

Transportation data

Cargo group	34
State	liquid
Family name	esters

Reactivity data

Water	No
Acid(s)	Yes

GESAMP Hazard profile

Human toxicity threshold

Ecotoxicity

COPPER ACETOARSENITE

UN Number: 1585

Also known as: ACETOARSENITE DE CUIVRE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1585

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	1100 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	1014
Density of gas (kg/m ³)	1100

Behaviour at sea

Persistence (days) 1.6

Additional data

Colour	green
Odour	odourless
Standard behavior classification	D, SD, S

Transportation data

Package group	II
State	solid
Temperature (°C)	ambient
Pressure (Pa)	ambient
IMO class	6.1

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

TLV-TWA	0.06 (As)
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TEEL-1 (mg/m3)	3.38
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TEEL-2 (mg/m3)	22
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TEEL-3 (mg/m3)	22
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Ecotoxicity

COPPER ARSENITE

UN Number: 1586

Also known as: ARSENITE DE CUIVRE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1586

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	1100 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	277.4
Vapour Pressure (Pa)	130 [Pa] at a temperature of 20°C

Behaviour at sea

Persistence (days) 1.9

Additional data

Colour	green
Odour	odourless
Standard behavior classification	D, SD, S

Transportation data

Package group	II
State	solid
Temperature (°C)	ambient
Pressure (Pa)	ambient
IMO class	6.1

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

TLV-TWA

0.06 (As)

Ecotoxicity

COPPER CHLORIDE

UN Number: 2802

Also known as: CHLORURE DE CUIVRE, CUPRIC CHLORIDE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 2802

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	3300 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	170.48
Boiling Point (°C)	993
Melting Point (°C)	498

Behaviour at sea

Additional data

Colour	blue-green
Odour	odourless
Standard behavior classification	SD

Transportation data

Package group	III
State	solid
Temperature (°C)	ambient
Pressure (Pa)	ambient

Reactivity data

Water	No
Acid(s)	No
Base(s)	No
Metal(s) and alloys	Yes

Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

TLV-TWA	0.4 (Cu)
TEEL-1 (mg/m3)	0.317
TEEL-2 (mg/m3)	0.529

Ecotoxicity

COPPER CYANIDE

UN Number: 1587

Also known as: CUPRIC CYANIDE, CUPROUS CYANIDE, CYANURE DE CUIVRE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1587

Physical chemical data

Physical State (20°C) Solid

Molar mass (g/mol) 89.56

Behaviour at sea

Additional data

Colour white

Marine pollutant P

Transportation data

Package group II

State solid

Temperature (°C) ambient

IMO class 6.1

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

IDHL 45

TLV-TWA 4.5

TEEL-2 (mg/m3) 4.23

Ecotoxicity

CREOSOTE (coal tar)

UN Number: 3082 - CAS Number: 8001-58-9

Also known as: COAL TAR OIL, CREOSOTE OIL, DEAD OIL

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	3082
CAS number	8001-58-9

Physical chemical data

Physical State (20°C)	Liquid/Solid
Density (kg/m ³)	1070 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	93.38
Density of gas (kg/m ³)	4.17
Boiling Point (°C)	182/400
Melting Point (°C)	-0.146341463
Vapour Pressure (Pa)	300 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	336
Flash Point (°C)	> 68

Behaviour at sea

Additional data

Colour	yellow to black
Odour	tarry odour

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	21
Temperature (°C)	ambient
Family name	phenols, cresols

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	No
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	4 - ≥ 4 and < 5
Bioaccumulation in BCF (A1B)	4 - ≥ 500 and < 4000
Bioaccumulation (A1)	4 - High potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	2 - Moderate
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TEEL-1 (mg/m3)	0.6
TEEL-2 (mg/m3)	80
TEEL-3 (mg/m3)	80

Ecotoxicity

CREOSOTE (wood tar)

UN Number: 3082 - CAS Number: 8021-39-4

Also known as: BEECHWOOD CREOSOTE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	3082
CAS number	8021-39-4

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1050 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	> 80
Density of gas (kg/m ³)	3.57
Boiling Point (°C)	195/400
Melting Point (°C)	< 15
Vapour Pressure (Pa)	100 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	335
Flash Point (°C)	68

Behaviour at sea

Additional data

Colour	yellow to black
Odour	tarry odour

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	21
State	liquid
Temperature (°C)	ambient
Family name	phenols, cresols

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	No
Oxidizing agents	Yes

GESAMP Hazard profile

Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	5 - Very highly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	SD - Sinker/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

Ecotoxicity

CRESOLS (ortho, meta, para)

UN Number: 2076 - CAS Number: 1319-77-3

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2076
CAS number	1319-77-3

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1070 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	108.13
Density of gas (kg/m ³)	4.799
Boiling Point (°C)	177
Melting Point (°C)	24
Vapour Pressure (Pa)	67 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	600
Flash Point (°C)	63
Lower explosivity limit (LEL) (volume %)	1.1

Behaviour at sea

Persistence (days)	1.6
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Additional data

Colour	colourless to yellow
Odour	sweet, tar odour
Standard behavior classification	SD

Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	21
State	liquid, solid
Family name	phenols, cresols

IMO class	6.1
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Reactivity data

Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	2 - ≥ 2 and < 3
Bioaccumulation in BCF (A1B)	2 - ≥ 10 and < 100
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	4 - High
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	SD - Sinker/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

IDHL	250
TEEL-1 (mg/m3)	15 ppm
TEEL-2 (mg/m3)	24.9 ppm
TEEL-3 (mg/m3)	250 ppm

Ecotoxicity

CRESYLIC ACID dephenolized

UN Number: 2022

Also known as: ACIDE CRESYLIQUE déphénolisé, DEPHENOLISED CRESOLS

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 2022

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1040 [Kg/m ³] at a temperature of 20°C
Boiling Point (°C)	250
Melting Point (°C)	-12
Vapour Pressure (Pa)	133 (37.8°C) [Pa] at a temperature of 20°C
Flash Point (°C)	86

Behaviour at sea

Additional data

Colour	dark brown
Odour	phenolic odour
Standard behavior classification	SD

Transportation data

Transport mode	Bulk, Packaged
Package group	II
State	liquid
IMO class	6.1

Reactivity data

Water No

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	2 - ≥ 2 and < 3
Bioaccumulation in BCF (A1B)	2 - ≥ 10 and < 100
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

Ecotoxicity

CROTONALDEHYDE inhibited or stabilized

UN Number: 1143 - CAS Number: 4170-30-3

Also known as: 2-BUTENAL

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1143
CAS number	4170-30-3

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	852 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	70.09
Density of gas (kg/m ³)	3.096
Boiling Point (°C)	102
Melting Point (°C)	-74
Vapour Pressure (Pa)	4000 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	230
Flash Point (°C)	13
Lower explosivity limit (LEL) (volume %)	2.1
Upper explosivity limit (UEL) (volume %)	15.5

Behaviour at sea

Additional data

Colour	yellow
Odour	tar odour

Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	19
State	liquid

Temperature (°C)	ambient
Pressure (Pa)	under pressure
Family name	aldehydes
IMO class	6.1

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	No
Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	1 - Low
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	4 - High
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	4 - High
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

IDHL	400					
ERPG-1 (ppm)	0.2					
ERPG-3 (ppm)	15					
		10 min	30 min	60 min	4 hrs	8 hrs
AEGL-1 (ppm)	0.19	0.19	0.19	0.19	0.19	0.19
AEGL-2 (ppm)	27	8.9	4.4	1.1	0.56	
AEGL-3 (ppm)	44	27	14	2.6	1.5	

Ecotoxicity

CUPRIETHYLENEDIAMINE solution

UN Number: 1761

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1761

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1100 [Kg/m ³] at a temperature of 20°C
Boiling Point (°C)	100

Behaviour at sea

Additional data

Colour	blue, dark purple
Odour	fish odour

Transportation data

Package group	II
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	under pressure

Reactivity data

Water	No
Acid(s)	No
Base(s)	No
Metal(s) and alloys	No
Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

Ecotoxicity

CUT BACKS (asphalt or bitumen)

UN Number: 1999

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1999

Physical chemical data

Physical State (20°C) Liquid

Density (kg/m³) 1100 [Kg/m³] at a temperature of 20°C

Behaviour at sea

Additional data

Colour black

Odour tar odour

Transportation data

Package group II

Cargo group 33

State liquid

Temperature (°C) ambient

Pressure (Pa) ambient

Family name miscell. hydroc. mixt

IMO class 3.2/3.3

Reactivity data

Acid(s) Yes

Oxidizing agents Yes

GESAMP Hazard profile

Human toxicity threshold

Ecotoxicity

CYANOGEN BROMIDE

UN Number: 1889

Also known as: BROMINE CYANIDE, BROMOCYAN (T), BROMOCYANIDE, BROMOCYANOGEN, BROMURE DE CYANOGENE, CAMPILIT (T), CYANOBROMIDE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1889

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	2000 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	105.93
Density of gas (kg/m ³)	4.644
Boiling Point (°C)	62
Melting Point (°C)	52
Vapour Pressure (Pa)	13300 [Pa] at a temperature of 20°C

Behaviour at sea

Persistence (days) 1.6

Additional data

Colour	colourless
Odour	penetrating odour
Standard behavior classification	D, SD, S

Transportation data

State	solid
IMO class	6.1

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

IDHL	10 (as CN)
TLV-TWA	1.1 (CN)
TEEL-1 (mg/m3)	44
TEEL-2 (mg/m3)	44
TEEL-3 (mg/m3)	44

Ecotoxicity

CYANOGEN CHLORIDE inhibited

UN Number: 1589

Also known as: CHLORCYAN (T), CHLORINE CYANIDE, CHLOROCYANIDE, CHLOROCYANOGEN, CHLORURE DE CYANOGENE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1589

Physical chemical data

Physical State (20°C)	Gas
Density (kg/m ³)	2.58 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	61.48
Density of gas (kg/m ³)	2.58
Boiling Point (°C)	13
Melting Point (°C)	-6
Vapour Pressure (Pa)	176000 [Pa] at a temperature of 20°C
Flash Point (°C)	51

Behaviour at sea

Additional data

Colour	colourless
Odour	sharp, pungent odour

Transportation data

State	liq.compr.gas
IMO class	2(2.3)

Reactivity data

Water	Yes
Acid(s)	No
Base(s)	No

Metal(s) and alloys	No
Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

IDHL	45 (as CN)
TLV-TWA	0.3 (CN)
ERPG-2 (ppm)	0.4

Ecotoxicity

CYCLOHEPTANE

UN Number: 2241 - CAS Number: 291-64-5

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2241
CAS number	291-64-5

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	811 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	98.19
Density of gas (kg/m ³)	4.37
Boiling Point (°C)	118.5
Melting Point (°C)	-12
Vapour Pressure (Pa)	2000 [Pa] at a temperature of 20°C
Lower explosivity limit (LEL) (volume %)	1.1
Upper explosivity limit (UEL) (volume %)	6.7

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless
Standard behavior classification	FE

Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	31
State	liquid
Temperature (°C)	ambient
Family name	paraffins
IMO class	3.2

Reactivity data

Water	No
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	4 - ≥ 4 and < 5
Bioaccumulation (A1)	4 - High potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	0 - Not irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	FE - Floater/Evaporator
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

CYCLOHEXANE

UN Number: 1145 - CAS Number: 110-82-7

Also known as: Hexamethylene, Hexanaphthene, Hexahydrobenene, Cyclohexane

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1145
CAS number	110-82-7
Formula	C ₆ H ₁₂

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	779 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	1.27 [cSt] at a temperature of 20°C 1.1552 [cSt] at a temperature of 25°C
Molar mass (g/mol)	84.16
Density of gas (kg/m ³)	3.741
Solubility (g/L)	55 [g/L] at a temperature of 20°C and salinity of 0‰ 45 [g/L] at a temperature of 15°C and salinity of 0‰
Boiling Point (°C)	80.9
Melting Point (°C)	6.59
Critical molar volume (m ³ /mol)	0.000308
Critical temperature (°C)	553.8
Critical pressure (Pa)	4080000
Surface tension (mN/m)	24.68 [mN/m] at a temperature of 20°C 24.16 [mN/m] at a temperature of 25°C
Vapour Pressure (Pa)	10397 [Pa] at a temperature of 20°C 15999 [Pa] at a temperature of 30°C
Ignition Temperature (°C)	260
Flash Point (°C)	-18
Flash Point (Pensky-Martens closed cup) (°C)	-18
Lower explosivity limit (LEL) (volume %)	1.3
Upper explosivity limit (UEL) (volume %)	8.4

Vapor enthalpy (J/Kg)	356195 [J/Kg] at a temperature of 80.73°C 390810 [J/Kg] at a temperature of 25°C
Combustion enthalpy (J/Kg)	46573747
Specific heat capacity (J/(Kg·K))	1841
Henry's constant (mol/(m ³ ·Pa))	15198.7

Behaviour at sea

Log K _{ow}	3.4
Log K _{oc}	2.68
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Biodegradation in marine environment (Half-life) (days)	Not biodegradable
Bioconcentration factor (BCF)	239

Additional data

Colour	colourless
Odour	gasoline odour

MARPOL pollution category	Category	Description
	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.

Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	31
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	paraffins
IMO class	3.1

Reactivity data

Water	No
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GESAMP Hazard profile

Bioaccumulation in logP _{ow} (A1A)	3 - ≥3 and <4
Bioaccumulation in BCF (A1B)	3 - ≥100 and <500

Bioaccumulation (A1)	3 - Moderate potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	0 - Not irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	E - Evaporator
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold



IDHL	10000
Hazard statements	Physical
	H225 Highly flammable liquid and vapour.
	Health
	H304 May be fatal if swallowed and enters airways.
	H315 Causes skin irritation.
	H336 May cause drowsiness or dizziness.
	Environmental
	H400 Very toxic to aquatic life.
	H410 Very toxic to aquatic life with long lasting effects.
	Precautionary statements
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.	
P243 Take precautionary measures against static discharge.	
P273 Avoid release to the environment.	
P280 Wear protective gloves/protective clothing/eye protection/face protection.	
Response	
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.	
P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.	
P331 Do NOT induce vomiting.	
P332 + P313 If skin irritation occurs: Get medical advice/attention.	
P391 Collect spillage.	

TLV-TWA	300
TEEL-1 (mg/m3)	300 ppm
TEEL-2 (mg/m3)	500 ppm
TEEL-3 (mg/m3)	1300 ppm

Ecotoxicity

Lowest median lethal concentration (LC50) on crustacean (mg/l)	2.4
Lowest median lethal concentration (LC50) on fishes (mg/l)	8.3
Highest no observed effect concentration (NOEC) on algae (mg/l)	0.9
Highest no observed effect concentration (NOEC) on fishes (mg/l)	32
Assessment factor (AF)	100 on the short term
Predicted No Effect Concentration (PNEC) (µg/l)	9 [µg/l] on the short term

CYCLOHEXANOL

CAS Number: 108-93-0

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 108-93-0

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	947 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	100.16
Density of gas (kg/m ³)	1.67
Boiling Point (°C)	161
Melting Point (°C)	23
Vapour Pressure (Pa)	130 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	300
Flash Point (°C)	68
Lower explosivity limit (LEL) (volume %)	2.4
Upper explosivity limit (UEL) (volume %)	12

Behaviour at sea

Additional data

Colour	colourless to light yellow
Odour	alcohol odour

Transportation data

Cargo group	20
State	liquid, solid
Family name	alcohols, glycols

Reactivity data

Water	No
Acid(s)	Yes

Base(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	Fp - Persistent slick forming substance
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

IDHL	3500
TLV-TWA	50
TEEL-1 (mg/m3)	50 ppm
TEEL-2 (mg/m3)	50 ppm
TEEL-3 (mg/m3)	400 ppm

Ecotoxicity

CYCLOHEXANONE

UN Number: 1915 - CAS Number: 108-94-1

Also known as: Anone, Cyclohexyl Ketone, Hexanon, Ketoexamethylene, Nadone, Pimelic Ketone, Pimelin Ketone, Sextone, Cyclohexanone

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1915
CAS number	108-94-1
Formula	C ₆ H ₁₀ O

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	950 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	2.32 [cSt] at a temperature of 25°C
Molar mass (g/mol)	98.15
Density of gas (kg/m ³)	4.386
Solubility (g/L)	23000 [g/L] at a temperature of 20°C and salinity of 0‰ 25000 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	156
Melting Point (°C)	-31.2
Critical temperature (°C)	665
Critical pressure (Pa)	4600000
Surface tension (mN/m)	34 [mN/m] at a temperature of 20°C 35.05 [mN/m] at a temperature of 25°C
Interfacial tension (mN/m)	90 [mN/m] at a temperature of 20°C and salinity of 0‰
Vapour Pressure (Pa)	470 [Pa] at a temperature of 20°C 690 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	420
Flash Point (°C)	43
Flash Point (Pensky-Martens closed cup) (°C)	43.9
Flash Point (Cleveland open cup) (°C)	53.9
Lower explosivity limit (LEL) (volume %)	1.1

Upper explosivity limit (UEL) (volume %)	9.4
Vapor enthalpy (J/Kg)	459093 [J/Kg] at a temperature of 25°C
Combustion enthalpy (J/Kg)	33600000
Specific heat capacity (J/(Kg·K))	1856.3
Combustion efficiency (%)	96
Mass flow rate of the combustion surface (Kg/(m ² ·s))	0.05
Rad fraction (%)	23
Henry's constant (mol/(m ³ ·Pa))	0.91

Behaviour at sea

Log kow	0.81
Log koc	1.79
Aqueous photolysis (Half-life)	4.3
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Biodegradation in marine environment (Half-life) (days)	10
Bioconcentration factor (BCF)	2.23

Additional data

Colour	colourless to light yellow	
Odour	sweet, peppermint odour	
MARPOL pollution category	Category	Description
	Z	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment.
Standard behavior classification	FED	

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	18
State	liquid
Family name	ketones
IMO class	3.3

Reactivity data

Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes
Combustibles	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	1 - ≥1 and <10
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	FED - Floater/Evaporator/Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold



IDHL	5000
Hazard statements	Physical
	H226 Flammable liquid and vapour.
	Health
	H332 Harmful if inhaled.
Precautionary statements	Prevention
	P280 Wear protective gloves/protective clothing/eye protection/face protection.
	Response
	P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
TLV-TWA	25
TEEL-1 (mg/m3)	50 ppm
TEEL-2 (mg/m3)	50 ppm
TEEL-3 (mg/m3)	700 ppm

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	26
Lowest median lethal concentration (LC50) on crustacean (mg/l)	800

Lowest median lethal concentration (LC50) on fishes (mg/l)	527
Highest no observed effect concentration (NOEC) on algae (mg/l)	26
Assessment factor (AF)	100 on the short term 1000 on the long term
Predicted No Effect Concentration (PNEC) (µg/l)	260 [µg/l] on the short term 26 [µg/l] on the long term

CYCLOHEXYL ACETATE

UN Number: 2243 - CAS Number: 622-45-7

Also known as: ACETATE DE CYCLOHEXYLE, ACETIC ACID, CYCLOHEXYL ESTER, CYCLOHEXANYL ACETATE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2243
CAS number	622-45-7

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	966 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	142.22
Density of gas (kg/m ³)	6.32
Boiling Point (°C)	177
Melting Point (°C)	-65
Vapour Pressure (Pa)	500 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	335
Flash Point (°C)	57.8

Behaviour at sea

Additional data

Colour	colourless
Odour	fruity odour
Standard behavior classification	F/FE

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	34
State	liquid

Temperature (°C)	ambient
Family name	esters
IMO class	3.3

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	2 - ≥ 2 and < 3
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	FED - Floater/Evaporator/Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

CYCLOHEXYLAMINE

UN Number: 2357 - CAS Number: 108-91-8

Also known as: AMINOCYCLOHEXANE, AMINOHEXAHYDROBENZENE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2357
CAS number	108-91-8

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	865 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	99.18
Density of gas (kg/m ³)	4.386
Boiling Point (°C)	134
Melting Point (°C)	-18
Vapour Pressure (Pa)	1500 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	290
Flash Point (°C)	32
Lower explosivity limit (LEL) (volume %)	1.5
Upper explosivity limit (UEL) (volume %)	9.4

Behaviour at sea

Additional data

Colour	colourless
Odour	strong fish odour

Transportation data

Transport mode	Bulk, Packaged
Package group	II
State	liquid
Family name	aliphatic amines

Reactivity data

Acid(s)	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Skin irritation/corrosivity (D1)	3 - Corrosive
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TLV-TWA	10				
	10 min	30 min	60 min	4 hrs	8 hrs
AEGL-1 (ppm)	1.8	1.8	1.8	1.8	1.8
AEGL-2 (ppm)	11	11	8.6	5.4	2.7
AEGL-3 (ppm)	38	38	30	19	9.5

Ecotoxicity

CYCLOPENTANE

UN Number: 1146 - CAS Number: 287-92-3

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1146
CAS number	287-92-3

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	740 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	70.1
Density of gas (kg/m ³)	3.1
Boiling Point (°C)	49
Melting Point (°C)	-94
Vapour Pressure (Pa)	33500 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	380
Flash Point (°C)	-38
Lower explosivity limit (LEL) (volume %)	1.1
Upper explosivity limit (UEL) (volume %)	8.7

Behaviour at sea

Additional data

Colour	colourless
Odour	mild sweet

Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	31
State	liquid
Temperature (°C)	ambient
Family name	paraffins

IMO class	3.1
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Reactivity data

Water	No
Acid(s)	No
Base(s)	No
Static electricity	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	3 - ≥ 3 and < 4
Bioaccumulation (A1)	3 - Moderate potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	E - Evaporator
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

TLV-TWA	600
TEEL-1 (mg/m3)	1800 ppm
TEEL-2 (mg/m3)	3840 ppm
TEEL-3 (mg/m3)	15000 ppm

Ecotoxicity

CYCLOPENTENE

UN Number: 2246 - CAS Number: 142-29-0

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2246
CAS number	142-29-0

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	800 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	68.12
Density of gas (kg/m ³)	3.1
Boiling Point (°C)	44
Melting Point (°C)	-93
Vapour Pressure (Pa)	40000 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	395
Flash Point (°C)	-30
Lower explosivity limit (LEL) (volume %)	1.5

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless

Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	30
State	liquid
Temperature (°C)	refrigerate
Family name	olefins
IMO class	3.1

Reactivity data

Water	No
Acid(s)	Yes
Static electricity	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	2 - ≥ 2 and < 3
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	0 - Not irritating
Specific Health Concern (D3)	A - Aspiration
Interference with coastal amenities (E2)	E - Evaporator
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

CYMENES (ortho, meta, para)

UN Number: 2046

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 2046

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	857 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	134.2
Density of gas (kg/m ³)	6.063
Boiling Point (°C)	177
Melting Point (°C)	-68
Vapour Pressure (Pa)	688840 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	435
Flash Point (°C)	47
Lower explosivity limit (LEL) (volume %)	0.7
Upper explosivity limit (UEL) (volume %)	5.6

Behaviour at sea

Additional data

Colour	colourless
Odour	mild pleasant odour
Marine pollutant	P

Transportation data

Package group	III
Cargo group	32
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	aromatic hydrocarbons

IMO class	3.3
Reactivity data	
Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Human toxicity threshold

Ecotoxicity

CYPERMETHRIN

UN Number: 2588

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 2588

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	1250 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	416.3
Boiling Point (°C)	220
Melting Point (°C)	60/80
Vapour Pressure (Pa)	<10000 [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Marine pollutant P

Transportation data

Package group	I/II/III
State	solid
IMO class	6.1

Reactivity data

Water	No
Base(s)	Yes
Metal(s) and alloys	No

GESAMP Hazard profile

Human toxicity threshold

Ecotoxicity

DDT

UN Number: 2761

Also known as: AGRITAN, ANOFEX, ARKOTINE, AZOTOX, BOVIDERMOL, CHLOROPHENOTHAN, CHLOROPHENOTHANE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 2761

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m³)	1560 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	354.5

Behaviour at sea

Persistence (days) 2.7

Additional data

Colour	colourless
Odour	odourless
Marine pollutant	P
Standard behavior classification	D, SD, S

Transportation data

Package group	III
State	solid
IMO class	6.1

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

TLV-TWA 0.06

TEEL-3 (mg/m3) 500

Ecotoxicity

DECAHYDRONAPHTHALENE

UN Number: 1147 - CAS Number: 91-17-8

Also known as: BICYCLO (4,4,0) DECANE, DEC (T), DECALIN (T), DEKALIN (T)

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1147
CAS number	91-17-8

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	890 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	138.2
Density of gas (kg/m ³)	6.192
Boiling Point (°C)	195
Melting Point (°C)	-31
Vapour Pressure (Pa)	130 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	250
Flash Point (°C)	56
Lower explosivity limit (LEL) (volume %)	0.7
Upper explosivity limit (UEL) (volume %)	5.4

Behaviour at sea

Additional data

Colour	colourless
Odour	turpentine odour

Transportation data

Package group	II
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient

IMO class	3.3
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Reactivity data

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	4 - ≥ 4 and < 5
Bioaccumulation in BCF (A1B)	4 - ≥ 500 and < 4000
Bioaccumulation (A1)	4 - High potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	F - Floating substance, not likely to evaporate or to dissolve quickly
Effects on wildlife and bottom habitats (E3)	1 - Is a floater; and/or is slightly acutely toxic; and/or is mildly irritant to skin and/or eyes

Human toxicity threshold

TLV-TWA	25
TEEL-1 (mg/m3)	1.5 ppm
TEEL-2 (mg/m3)	10 ppm
TEEL-3 (mg/m3)	75 ppm

Ecotoxicity

DECALDEHYDE

UN Number: 3082 - CAS Number: 143-08-8

Also known as: CAPRALDEHYDE, CAPRIC ALDEHYDE, 1-DECANAL, n-DECANAL, 1-DECYL ALDEHYDE, 1, Nonanol, N-Nonyl Alcohol, Nonanol

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	3082
CAS number	143-08-8
Formula	C ₉ H ₂₀ O

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	830 [Kg/m ³] at a temperature of 20°C 838.3 [Kg/m ³] at a temperature of 5°C 834.8 [Kg/m ³] at a temperature of 10°C 829.1 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	14.142 [cSt] at a temperature of 20°C 11.014 [cSt] at a temperature of 25°C 18.192 [cSt] at a temperature of 5°C 22.484 [cSt] at a temperature of 10°C 14.944 [cSt] at a temperature of 20°C
Molar mass (g/mol)	145.3
Density of gas (kg/m ³)	6.94
Solubility (g/L)	0.14 [g/L] at a temperature of 25°C and salinity of 0‰ 130 [g/L] at a temperature of 20°C and salinity of 0‰ 120 [g/L] at a temperature of 20°C and salinity of 5‰ 94 [g/L] at a temperature of 20°C and salinity of 30‰
Boiling Point (°C)	209
Melting Point (°C)	-5
Critical molar volume (m ³ /mol)	0.000572
Critical temperature (°C)	670.7
Critical pressure (Pa)	2528000

Surface tension (mN/m)	27.89 [mN/m] at a temperature of 25°C
	28.91 [mN/m] at a temperature of 5.7°C
	28.02 [mN/m] at a temperature of 11.2°C
	27.8 [mN/m] at a temperature of 18.8°C
Vapour Pressure (Pa)	29 [Pa] at a temperature of 20°C
Vapor enthalpy (J/Kg)	532810 [J/Kg] at a temperature of 25°C
Combustion enthalpy (J/Kg)	41198164
Specific heat capacity (J/(Kg·K))	2470
Henry's constant (mol/(m ³ ·Pa))	3.14

Behaviour at sea

Log K _{ow}	4.26
Log K _{oc}	2.46
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Bioconcentration factor (BCF)	160

Additional data

Colour	colourless to light yellow
Odour	pleasant odour

MARPOL pollution category	Category	Description
	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.

Transportation data

Cargo group	19
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	aldehydes

Reactivity data

Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	3 - ≥3 and <4
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Bioaccumulation (A1)	3 - Moderate potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	FE - Floater/Evaporator
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

TEEL-1 (mg/m3)	7.5 ppm
TEEL-2 (mg/m3)	50 ppm
TEEL-3 (mg/m3)	250 ppm

Ecotoxicity

Lowest median lethal concentration (LC50) on crustacean (mg/l)	25
Lowest median lethal concentration (LC50) on fishes (mg/l)	5.7
Assessment factor (AF)	50 on the short term
Predicted No Effect Concentration (PNEC) (µg/l)	8 [µg/l] on the short term

DECANE

UN Number: 2247 - CAS Number: 124-18-5

Also known as: n-ALKANES (C10+), n-DECANE

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number	2247
CAS number	124-18-5

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	730 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	142.29
Density of gas (kg/m ³)	6.32
Boiling Point (°C)	174
Melting Point (°C)	-30
Vapour Pressure (Pa)	52 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	210
Flash Point (°C)	46
Lower explosivity limit (LEL) (volume %)	0.82
Upper explosivity limit (UEL) (volume %)	5.4

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless
Standard behavior classification	F/FD

Transportation data

Package group	III
Cargo group	31
State	liquid

Temperature (°C)	ambient
Family name	paraffins
IMO class	3.3

Reactivity data

Water	No
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	5 - ≥ 5 and \leq ca.7
Bioaccumulation (A1)	5 - Very high potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	0 - Not irritating
Interference with coastal amenities (E2)	F - Floating substance, not likely to evaporate or to dissolve quickly
Effects on wildlife and bottom habitats (E3)	1 - Is a floater; and/or is slightly acutely toxic; and/or is mildly irritant to skin and/or eyes

Human toxicity threshold

TEEL-1 (mg/m3)	0.2 ppm
TEEL-2 (mg/m3)	1.25 ppm
TEEL-3 (mg/m3)	5000 ppm

Ecotoxicity

DECANOIC ACID

CAS Number: 334-48-5

Also known as: ACIDE DECANOIQUE, n-CAPRIC ACID, CAPRINIC ACID, n-DECANOIC ACID, DECOIC ACID, n-DECYLIC ACID

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 334-48-5

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	893 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	172.27
Density of gas (kg/m ³)	7.66
Boiling Point (°C)	268/270
Melting Point (°C)	31/32
Flash Point (°C)	> 110

Behaviour at sea

Additional data

Colour	white
Odour	rancid, unpleasant

Transportation data

State	solid
Temperature (°C)	ambient
Family name	organic acids

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes

Metal(s) and alloys	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	4 - ≥ 4 and < 5
Bioaccumulation (A1)	4 - High potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	1 - Low
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	Fp - Persistent slick forming substance
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

DECYL ACRYLATE

UN Number: 3082 - CAS Number: 2156-96-9

Also known as: ACRYLATE DE DECYLE, ACRYLIC ACID, DECYL ESTER, n-DECYL ACRYLATE, DECYL ACRYLATE, inhibited, DECYL PROP-2-ENOATE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	3082
CAS number	2156-96-9

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	878 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	212.37
Density of gas (kg/m ³)	9.42 (E)
Boiling Point (°C)	263
Melting Point (°C)	< 0
Flash Point (°C)	227

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless
Standard behavior classification	F/FE/E

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	14
State	liquid
Temperature (°C)	ambient
Family name	acrylates

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	Yes (Cu, Zn)
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	5 - ≥ 5 and \leq ca.7
Bioaccumulation (A1)	5 - Very high potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	5 - Very highly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	Fp - Persistent slick forming substance
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

DECYLOXYTETRAHYDROTHIOPHENE DIOXIDE

Also known as: DIOXYDE DE DECYLOXYTETRAHYDROTHIOPHENE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1030 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	276
Boiling Point (°C)	> 150
Melting Point (°C)	< 10
Vapour Pressure (Pa)	< 10 [Pa] at a temperature of 20°C
Flash Point (°C)	130

Behaviour at sea

Additional data

Colour	yellow
Odour	odourless

Transportation data

State	liquid
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Reactivity data

Water	No
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GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	3 - ≥ 3 and < 4
Bioaccumulation (A1)	3 - Moderate potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable

Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	0 - Not irritating
Interference with coastal amenities (E2)	Fp - Persistent slick forming substance
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

DEXTROSE solutions

CAS Number: 50-99-7

Also known as: COM SUGAR SOLUTION

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 50-99-7

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1200 (E) [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	180.2
Boiling Point (°C)	> 100
Melting Point (°C)	146

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless

Transportation data

Cargo group	43
State	liquid
Temperature (°C)	54.4/62.7
Family name	miscell. water solut.

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Eye irritation/corrosivity (D2)	0 - Not irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	0 - Is not a floater; and does not pose any known health hazards

Human toxicity threshold

TEEL-1 (mg/m3)	1.25
TEEL-2 (mg/m3)	7.5
TEEL-3 (mg/m3)	500

Ecotoxicity

DI-(2-ETHYLHEXYL)ADIPATE

CAS Number: 103-23-1

Also known as: ADIPATE DE DI-(2-ETHYLHEXYL), ADIPIC ACID, BIS(2-ETHYLHEXYL)ESTER, BIS(2-ETHYLHEXYL)ADIPATE, Adipic Acid, Bis(2-Ethylhexyl) Ester, Bis(2-Ethylhexyl) Hexanedioate, Di(2-Ethylhexyl)Adipate, Di-2-Ethylhexyl Adipate, Dioctyl Adipate, Hexanedioic Acid, Bis(2-Ethylhexyl) Ester, Hexanedioic Acid, Dioctyl Ester, Deha, Adipic Acid, Di-2-Ethylhexyl Ester, Bis(Ethyl-2-Hexyl) Adipate, Doa, Bis(2-Ethylhexyl) Adipate, Adipate De Di-2-Ethylhexyle

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number	103-23-1
Formula	C ₂₂ H ₄₂ O ₄

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	923 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	14.2 [cSt] at a temperature of 20°C
Molar mass (g/mol)	370.58
Density of gas (kg/m ³)	16.51
Solubility (g/L)	1 [g/L] at a temperature of 20°C and salinity of 0‰
Boiling Point (°C)	417
Melting Point (°C)	-67.8
Surface tension (mN/m)	30.2 [mN/m] at a temperature of 20°C
Flash Point (°C)	204
Flash Point (Pensky-Martens closed cup) (°C)	196
Combust enthalpy (J/Kg)	33600000
Combustion efficiency (%)	96
Mass flow rate of the combustion surface (Kg/(m ² ·s))	0.02
Rad fraction (%)	23
Henry's constant (mol/(m ³ ·Pa))	0.04

Behaviour at sea

Log kow	8.1
Log koc	5.78
Biodegradation in estuary environment (Half-life) (days)	1
Biodegradation in marine environment (Half-life) (days)	10
Bioconcentration factor (BCF)	27

Additional data

Colour	clear to straw coloured	
Odour	odourless	
MARPOL pollution category	Category	Description
	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.
Standard behavior classification	F/FE/E	

Transportation data

Cargo group	34
State	liquid
Temperature (°C)	ambient
Family name	esters

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	No
Metal(s) and alloys	No
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	2 - ≥10 and <100
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	2 - Moderate
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible

Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	Fp - Persistent slick forming substance
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	> 1.4
Lowest median lethal concentration (LC50) on crustacean (mg/l)	> 0.23
Lowest median lethal concentration (LC50) on fishes (mg/l)	> 0.78
Highest no observed effect concentration (NOEC) on algae (mg/l)	> 0.78
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	0.035
Assessment factor (AF)	100 on the short term 100 on the long term
Predicted No Effect Concentration (PNEC) (µg/l)	2.3 [µg/l] on the short term 0.35 [µg/l] on the long term

DI-(2-ETHYLHEXYL)PHOSPHORIC ACID

UN Number: 1902 - CAS Number: 298-07-7

Also known as: ACIDE DI-(2-ETHYLHEXYL)PHOSPHORIQUE, BIS(2-ETHYLHEXYL)HYDROGEN PHOSPHATE, BIS(2-ETHYLHEXYL)ORTHOPHOSPHATE, DEHPA, DI-(2-ETHYLHEXYL)PHOSPHATE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1902
CAS number	298-07-7

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	977 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	322.4
Boiling Point (°C)	decomp.
Melting Point (°C)	< -60
Vapour Pressure (Pa)	< 100 [Pa] at a temperature of 20°C
Flash Point (°C)	196

Behaviour at sea

Additional data

Colour	light yellow
Odour	odourless

Transportation data

Transport mode	Bulk, Packaged
Package group	III
State	liquid
Temperature (°C)	ambient

Reactivity data

Water	No
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Metal(s) and alloys	Yes
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GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	2 - ≥ 2 and < 3
Bioaccumulation in BCF (A1B)	1 - ≥ 1 and < 10
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	Fp - Persistent slick forming substance
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

TEEL-1 (mg/m3)	0.06
TEEL-2 (mg/m3)	0.4

Ecotoxicity

DI-(normal)-BUTYL AMINE

UN Number: 2248

Also known as: N-BUTYL-1-BUTANAMINE, DI-n-BUTYL AMINE, N-DIBUTYLAMINE, DNBA (T)

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 2248

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	759 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	129.25
Boiling Point (°C)	159
Vapour Pressure (Pa)	300 [Pa] at a temperature of 20°C
Lower explosivity limit (LEL) (volume %)	1.1

Behaviour at sea

Persistence (days) 1.6

Additional data

Colour	colourless
Odour	weak ammonia, fish odour
Standard behavior classification	D, FED, FE

Transportation data

Package group	II
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient

Reactivity data

Water	No
Acid(s)	No

Base(s)	No
Metal(s) and alloys	Yes
Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m3)	0.75 ppm
TEEL-2 (mg/m3)	5 ppm
TEEL-3 (mg/m3)	50 ppm

Ecotoxicity

DI-(normal)-BUTYL PHTHALATE

UN Number: 3082

Also known as: o-BENZENE DICARBOXYLIC ACID DIBUTYL ESTER, BENZENE-o-DICARBOXYLIC ACID DI-N-BUTYL ESTER, BUTYL PHTHALATE, CELLUFLEX DPB, DBP (T), DIBUTYL 1,2-BENZENE DICARBOXYLATE, DI-N-BUTYL PHTHALATE, DIBUTYL PHTHALATE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 3082

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1049 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	278.35
Boiling Point (°C)	335
Melting Point (°C)	-35
Vapour Pressure (Pa)	446556 [Pa] at a temperature of 20°C
Flash Point (°C)	180
Lower explosivity limit (LEL) (volume %)	0.5
Upper explosivity limit (UEL) (volume %)	2.5

Behaviour at sea

Persistence (days) 1.9

Additional data

Colour	colourless
Odour	odourless

Transportation data

Cargo group	34
State	liquid
Family name	esters

Reactivity data

Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Human toxicity threshold

IDHL	800
TLV-TWA	0.4

Ecotoxicity

DI-n-BUTYL ETHER

UN Number: 1149 - CAS Number: 111-92-2

Also known as: BUTYL ETHER, n-BUTYL ETHER

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number	1149
CAS number	111-92-2

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	800 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	130.2
Density of gas (kg/m ³)	5.805
Boiling Point (°C)	142
Melting Point (°C)	-95
Vapour Pressure (Pa)	600 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	175
Flash Point (°C)	22
Lower explosivity limit (LEL) (volume %)	0.9
Upper explosivity limit (UEL) (volume %)	8.5

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless
Standard behavior classification	FE

Transportation data

Package group	III
Cargo group	41
State	liquid

Family name	ethers
IMO class	3.3

Reactivity data

Water	No
Acid(s)	Yes
Static electricity	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	2 - ≥ 2 and < 3
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	FD - Floater/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TEEL-1 (mg/m3)	3 ppm
TEEL-2 (mg/m3)	20 ppm
TEEL-3 (mg/m3)	400 ppm

Ecotoxicity

DI-n-HEXYL ADIPATE

CAS Number: 110-33-8

Also known as: ADIPATE DE DI-n-HEXYLE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 110-33-8

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	939 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	155.07
Boiling Point (°C)	> 200
Melting Point (°C)	-11
Vapour Pressure (Pa)	500 [Pa] at a temperature of 20°C
Flash Point (°C)	163

Behaviour at sea

Additional data

Colour	colourless
Odour	mild, ester-like
Standard behavior classification	FE/F

Transportation data

Cargo group	34
State	liquid
Temperature (°C)	ambient
Family name	esters

Reactivity data

Water	No
Acid(s)	Yes

Oxidizing agents	Yes
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GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	5 - ≥ 5 and \leq ca.7
Bioaccumulation (A1)	5 - Very high potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	5 - Very highly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	0 - Not irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	FE - Floater/Evaporator
Effects on wildlife and bottom habitats (E3)	1 - Is a floater; and/or is slightly acutely toxic; and/or is mildly irritant to skin and/or eyes

Human toxicity threshold

Ecotoxicity

DI-tertiary-BUTYL PEROXIDE

UN Number: 2102

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 2102

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	800 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	146.2
Density of gas (kg/m ³)	6.579
Boiling Point (°C)	80
Melting Point (°C)	-30
Vapour Pressure (Pa)	2800 [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Standard behavior classification FE

Transportation data

Package group	II
State	liquid
IMO class	5.2

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

Ecotoxicity

DIACETONE ALCOHOL

UN Number: 1148

Also known as: DIACETONE, DIACETONE ALCOOL, DIKETONE ALCOHOL

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number 1148

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	938 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	116.16
Density of gas (kg/m ³)	1.806
Boiling Point (°C)	169.4
Melting Point (°C)	-47
Vapour Pressure (Pa)	140 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	640
Flash Point (°C)	58
Lower explosivity limit (LEL) (volume %)	1.8
Upper explosivity limit (UEL) (volume %)	6.9

Behaviour at sea

Additional data

Colour	colourless to light yellow
Odour	mild pleasant odour

Transportation data

Package group	III
Cargo group	20
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient

Family name	alcohols, glycols
IMO class	3.2/3.3

Reactivity data

Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

IDHL	2100
TLV-TWA	50
TEEL-1 (mg/m3)	50 ppm
TEEL-2 (mg/m3)	50 ppm
TEEL-3 (mg/m3)	1800 ppm

Ecotoxicity

DIBROMODIFLUOROMETHANE

UN Number: 1941

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1941

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	2270 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	209.8
Density of gas (kg/m ³)	8.7
Boiling Point (°C)	22.8
Melting Point (°C)	-101.1
Vapour Pressure (Pa)	83000 [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Transportation data

Package group	III
State	liquid
IMO class	6.1

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

Ecotoxicity

DIBROMOMETHANE

UN Number: 2664 - CAS Number: 74-95-3

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2664
CAS number	74-95-3

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	2497 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	173.83
Density of gas (kg/m ³)	7.80 (E)
Boiling Point (°C)	99
Melting Point (°C)	-52
Vapour Pressure (Pa)	4650 [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Colour	colourless to pale yellow
Odour	sweet, pleasant
Standard behavior classification	SD

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	36
State	liquid
Family name	halogenated hydrocarbons
IMO class	6.1

Reactivity data

Water	No
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Metal(s) and alloys	Yes (Al, Mn, Zn)
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GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	SD - Sinker/Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

TEEL-1 (mg/m3)	30 ppm
TEEL-2 (mg/m3)	200 ppm
TEEL-3 (mg/m3)	1250 ppm

Ecotoxicity

DIBUTYL HYDROGEN PHOSPHONATE

Also known as: DIBUTYL HYDROGENPHOSPHITE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	980 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	194.21
Boiling Point (°C)	121
Melting Point (°C)	< 0
Vapour Pressure (Pa)	< 5000 [Pa] at a temperature of 20°C
Flash Point (°C)	120

Behaviour at sea

Additional data

Colour	colourless
Odour	mild

Transportation data

State	liquid
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Reactivity data

Water	Yes
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GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible

Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Skin irritation/corrosivity (D1)	3 - Corrosive
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	F - Floating substance, not likely to evaporate or to dissolve quickly
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

Ecotoxicity

DICHLOROBENZENE (ortho-)

UN Number: 1591

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1591

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1306 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	147.01
Density of gas (kg/m ³)	6.54
Boiling Point (°C)	180
Melting Point (°C)	-18
Vapour Pressure (Pa)	23328 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	640
Flash Point (°C)	66
Lower explosivity limit (LEL) (volume %)	2.2
Upper explosivity limit (UEL) (volume %)	9.2

Behaviour at sea

Additional data

Colour	colourless
Odour	pleasant odour

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	36
State	liquid
Family name	halogenated hydrocarb
IMO class	6.1

Reactivity data

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	3 - ≥ 3 and < 4
Bioaccumulation in BCF (A1B)	4 - ≥ 500 and < 4000
Bioaccumulation (A1)	4 - High potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	1 - Low
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

IDHL	1000
TLV-TWA	75
TEEL-1 (mg/m3)	50 ppm
TEEL-2 (mg/m3)	50 ppm
TEEL-3 (mg/m3)	200 ppm

Ecotoxicity

DICHLOROETHYLEETHER

UN Number: 1916

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1916

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1220 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	143
Density of gas (kg/m ³)	1.548
Boiling Point (°C)	178
Melting Point (°C)	-52
Vapour Pressure (Pa)	1100 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	370
Flash Point (°C)	55

Behaviour at sea

Additional data

Colour	colourless
Odour	sweet, pleasant odour

Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	41
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	ethers
IMO class	6.1

Reactivity data

Acid(s)

Yes

GESAMP Hazard profile

Biodegradation (A2)

NR - Not readily biodegradable

Human toxicity threshold

IDHL	250
TEEL-1 (mg/m3)	10 ppm
TEEL-2 (mg/m3)	25.7 ppm
TEEL-3 (mg/m3)	100 ppm

Ecotoxicity

DICHLOROMETHANE

UN Number: 1593 - CAS Number: 75-09-2

Also known as: AEROTHANE MM (T), DCM, Dichloromethane, Methylene Dichloride, Methane Dichloride, Methylene Bichloride, Methylene Chloride

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1593
CAS number	75-09-2
Formula	CH ₂ Cl ₂

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	1322 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	0.32 [cSt] at a temperature of 20°C 0.31132 [cSt] at a temperature of 25°C
Molar mass (g/mol)	84.93
Density of gas (kg/m ³)	3.741
Solubility (g/L)	20000 [g/L] at a temperature of 20°C and salinity of 0‰ 16700 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	40
Melting Point (°C)	-97
Critical temperature (°C)	510
Critical pressure (Pa)	6100000
Surface tension (mN/m)	28.33 [mN/m] at a temperature of 20°C 27.2 [mN/m] at a temperature of 25°C
Vapour Pressure (Pa)	47000 [Pa] at a temperature of 20°C 58200 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	665
Lower explosivity limit (LEL) (volume %)	12
Upper explosivity limit (UEL) (volume %)	19
Vapor enthalpy (J/Kg)	330390 [J/Kg] at a temperature of 40°C 339338 [J/Kg] at a temperature of 25°C

Combust enthalpy (J/Kg)	6050000
Specific heat capacity (J/(Kg·K))	1191.6
Combustion efficiency (%)	33
Mass flow rate of the combustion surface (Kg/(m ² ·s))	0.03
Rad fraction (%)	40
Henry's constant (mol/(m ³ ·Pa))	206

Behaviour at sea

Log kow	1.3
Log koc	1.4
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Biodegradation in marine environment (Half-life) (days)	Not biodegradable
Bioconcentration factor (BCF)	40

Additional data

Colour	colourless
Odour	sweet, pleasant odour

MARPOL pollution category	Category	Description
	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.

Standard behavior classification	SD
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Transportation data

Package group	III
Cargo group	36
State	liquid
Family name	halogenated hydrocarb
IMO class	6.1

Reactivity data

Notable risks	On combustion, forms toxic and corrosive fumes Reacts with alkalis.
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GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥1 and <2
Bioaccumulation in BCF (A1B)	2 - ≥10 and <100

Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Specific Health Concern (D3)	C - Carcinogenicity
Interference with coastal amenities (E2)	SD - Sinker/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



IDHL	5000
Hazard statements	Health
	H351 Suspected of causing cancer.
Precautionary statements	Prevention
	P201 Obtain special instructions before use.
	P202 Do not handle until all safety precautions have been read and understood.
	P281 Use personal protective equipment as required.
	Response
	P308 + P313 IF exposed or concerned: Get medical advice/attention.
	Storage
	P405 Store locked up.
	Disposal
	P501 Dispose of contents/container to ...
TLV-TWA	500
ERPG-1 (ppm)	300
ERPG-2 (ppm)	750
ERPG-3 (ppm)	4000

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	500
Lowest median lethal concentration (LC50) on crustacean (mg/l)	108.5
Lowest median lethal concentration (LC50) on fishes (mg/l)	97

Highest no observed effect concentration (NOEC) on algae (mg/l)	550
Highest no observed effect concentration (NOEC) on fishes (mg/l)	82.5
Assessment factor (AF)	50 on the short term 50 on the long term
Predicted No Effect Concentration (PNEC) (µg/l)	1940 [µg/l] on the short term 1650 [µg/l] on the long term

DICHLOROPROPENES

UN Number: 2047 - CAS Number: 8003-19-8

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2047
CAS number	8003-19-8

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1200 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	110.98
Density of gas (kg/m ³)	4.64
Boiling Point (°C)	77
Melting Point (°C)	-60
Vapour Pressure (Pa)	5598 [Pa] at a temperature of 20°C
Flash Point (°C)	29
Lower explosivity limit (LEL) (volume %)	5.3
Upper explosivity limit (UEL) (volume %)	14.5

Behaviour at sea

Additional data

Colour	colourless
Odour	sweet odour

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	15
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	under pressure
Family name	substituted allyls

IMO class	3.3
Reactivity data	
Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	2 - ≥ 2 and < 3
Bioaccumulation in BCF (A1B)	1 - ≥ 1 and < 10
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	1 - Low
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	SD - Sinker/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

Ecotoxicity

DICYCLOPENTADIENE

UN Number: 2048 - CAS Number: 77-73-6

Also known as: Dicyclopentadiene, Cyclopentadiene Dimer, Bicyclopentadiene, 1,3-Cyclopentadiene Dimer

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2048
CAS number	77-73-6
Formula	C ₁₀ H ₁₂

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Solid
Density (kg/m ³)	978 [Kg/m ³] at a temperature of 20°C 930.2 [Kg/m ³] at a temperature of 35°C
Kinematic viscosity (cSt)	0.79 [cSt] at a temperature of 21°C
Molar mass (g/mol)	132.31
Density of gas (kg/m ³)	5.934
Solubility (g/L)	20 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	170
Melting Point (°C)	32
Critical temperature (°C)	659.95
Critical pressure (Pa)	3060000
Vapour Pressure (Pa)	1300 [Pa] at a temperature of 20°C 1300 [Pa] at a temperature of 37.7°C
Flash Point (°C)	104
Flash Point (Cleveland open cup) (°C)	32
Lower explosivity limit (LEL) (volume %)	0.8
Upper explosivity limit (UEL) (volume %)	6.3
Combustion enthalpy (J/Kg)	43700000
Specific heat capacity (J/(Kg·K))	1700
Henry's constant (mol/(m ³ ·Pa))	1084.2

Behaviour at sea

Log kow	2.78
Log koc	3.18
Aqueous photolysis (Half-life)	32
Biodegradation in marine environment (Half-life) (days)	Not biodegradable
Bioconcentration factor (BCF)	100

Additional data

Colour	colourless	
Odour	camphor odour	
MARPOL pollution category	Category	Description
	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.
Standard behavior classification	FE	

Transportation data

Package group	III
Cargo group	30
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	olefins
IMO class	3.3

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	No
Metal(s) and alloys	No
Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	3 - ≥ 3 and < 4
Bioaccumulation (A1)	3 - Moderate potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable

Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	FE - Floater/Evaporator
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold



Hazard statements	Physical	
	H225	Highly flammable liquid and vapour.
	Health	
	H302	Harmful if swallowed.
	H315	Causes skin irritation.
	H319	Causes serious eye irritation.
	H330	Fatal if inhaled.
	H335	May cause respiratory irritation.
	Environmental	
	H411	Toxic to aquatic life with long lasting effects.

Precautionary statements	Prevention
	P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
	P243 Take precautionary measures against static discharge.
	P260 Do not breathe dust/fume/gas/mist/vapours/spray.
	P273 Avoid release to the environment.
	P280 Wear protective gloves/protective clothing/eye protection/face protection.
	Response
	P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
	P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
	P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
	P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P330 Rinse mouth.
	P391 Collect spillage.

ERPG-1 (ppm)	0.01
ERPG-3 (ppm)	75

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	27
Lowest median lethal concentration (LC50) on crustacean (mg/l)	8.0
Lowest median lethal concentration (LC50) on fishes (mg/l)	4.3
Highest no observed effect concentration (NOEC) on algae (mg/l)	18
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	3.2
Assessment factor (AF)	100 on the short term 100 on the long term
Predicted No Effect Concentration (PNEC) (µg/l)	43 [µg/l] on the short term 32 [µg/l] on the long term

DIETHANOLAMINE

CAS Number: 111-42-2

Also known as: BIS-2-HYDROXY ETHYLAMINE, DEA (T), DIETHYLALAMINE, DIETHYLAMINE, 2,2-DIHYDROXY, DIETHYLOLAMINE, 2,2-DIHYDROXYDIETHYL AMINE, DI (2-HYDROXY ETHYL) AMINE, DIOLAMINE, DIOLAMINE (T)

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 111-42-2

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1095 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	105.14
Density of gas (kg/m ³)	4.709
Boiling Point (°C)	268
Melting Point (°C)	28
Vapour Pressure (Pa)	1.3 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	660
Flash Point (°C)	138
Lower explosivity limit (LEL) (volume %)	1.6
Upper explosivity limit (UEL) (volume %)	10.8

Behaviour at sea

Additional data

Colour	colourless, white
Odour	weak ammonia, dead fish

Transportation data

State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient

Family name	alkanolamines
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Reactivity data

Acid(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Specific Health Concern (D3)	T - Specific Target Organ Toxicity following single or repeated exposure
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TEEL-1 (mg/m3)	150
TEEL-2 (mg/m3)	300
TEEL-3 (mg/m3)	300

Ecotoxicity

DIETHYL CARBONATE

UN Number: 2366

Also known as: CARBONATE D'ETHYLE, CARBONIC ACID, DIETHYL ESTER, DIATOL (T)

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 2366

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	975 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	118.13
Density of gas (kg/m ³)	5.289
Boiling Point (°C)	127
Melting Point (°C)	-43
Vapour Pressure (Pa)	1330 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	445
Flash Point (°C)	25
Lower explosivity limit (LEL) (volume %)	1.4
Upper explosivity limit (UEL) (volume %)	11

Behaviour at sea

Persistence (days) 1.6

Additional data

Colour	colourless
Odour	pleasant odour
Standard behavior classification	FE

Transportation data

Package group	III
State	liquid
IMO class	3.3

Reactivity data

Water	Yes
Acid(s)	No
Base(s)	No
Metal(s) and alloys	No
Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m3)	7.5 ppm
TEEL-2 (mg/m3)	60 ppm
TEEL-3 (mg/m3)	300 ppm

Ecotoxicity

DIETHYL ETHER

UN Number: 1155 - CAS Number: 60-29-7

Also known as: DIETHYL OXIDE

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number	1155
CAS number	60-29-7

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	714 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	74.12
Density of gas (kg/m ³)	3.35
Boiling Point (°C)	34.8
Melting Point (°C)	-116
Vapour Pressure (Pa)	59000 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	170
Flash Point (°C)	-45
Lower explosivity limit (LEL) (volume %)	1.85
Upper explosivity limit (UEL) (volume %)	36.5

Behaviour at sea

Additional data

Colour	colourless
Odour	sweet odour
Standard behavior classification	ED

Transportation data

Transport mode	Bulk, Packaged
State	liquid
Temperature (°C)	ambient

Pressure (Pa)	under pressure
IMO class	3.1

Reactivity data

Static electricity	Yes
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GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	1 - ≥1 and <10
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	DE - Dissolver/Evaporator
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

IDHL	19000
TLV-TWA	400
TEEL-1 (mg/m3)	500 ppm
TEEL-2 (mg/m3)	500 ppm
TEEL-3 (mg/m3)	1900 ppm

Ecotoxicity

DIETHYL PHTHALATE

CAS Number: 84-66-2

Also known as: ANOZOL (T), 1,2-BENZENE DICARBOXYLIC ACID, DIETHYL-ESTER, DEP (T)

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

CAS number 84-66-2

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1120 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	222
Density of gas (kg/m ³)	9.88
Boiling Point (°C)	298
Melting Point (°C)	-44
Ignition Temperature (°C)	457
Flash Point (°C)	117
Lower explosivity limit (LEL) (volume %)	0.75

Behaviour at sea

Additional data

Colour	white
Odour	mild chemical odour

Transportation data

State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient

Reactivity data

Water	No
Acid(s)	No

Base(s)	No
Metal(s) and alloys	No
Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	3 - ≥ 3 and < 4
Bioaccumulation in BCF (A1B)	3 - ≥ 100 and < 500
Bioaccumulation (A1)	3 - Moderate potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly
Effects on wildlife and bottom habitats (E3)	1 - Is a floater; and/or is slightly acutely toxic; and/or is mildly irritant to skin and/or eyes

Human toxicity threshold

TLV-TWA	0.5
TEEL-1 (mg/m3)	15
TEEL-2 (mg/m3)	100
TEEL-3 (mg/m3)	500

Ecotoxicity

DIETHYL SULPHATE

UN Number: 1594 - CAS Number: 64-67-5

Also known as: DIETHYL SULPHATE

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number	1594
CAS number	64-67-5

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1200 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	154.2
Density of gas (kg/m ³)	6.84
Boiling Point (°C)	208
Melting Point (°C)	-25
Vapour Pressure (Pa)	130 (47°C) [Pa] at a temperature of 20°C
Ignition Temperature (°C)	436
Flash Point (°C)	104
Lower explosivity limit (LEL) (volume %)	4.1

Behaviour at sea

Additional data

Colour	colourless
Odour	etheral, peppermint-like
Standard behavior classification	SD

Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	34
State	liquid

Temperature (°C)	ambient
Family name	esters
IMO class	6.1

Reactivity data

Water	Yes
Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes
Combustibles	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	SD - Sinker/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TEEL-1 (mg/m3)	0.2 ppm
TEEL-2 (mg/m3)	1.5 ppm
TEEL-3 (mg/m3)	25 ppm

Ecotoxicity

DIETHYLAMINE

UN Number: 1154 - CAS Number: 109-89-7

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1154
CAS number	109-89-7

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	708 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	73.14
Density of gas (kg/m ³)	3.264
Boiling Point (°C)	55
Melting Point (°C)	-50
Vapour Pressure (Pa)	53320 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	310
Flash Point (°C)	-20
Lower explosivity limit (LEL) (volume %)	1.8
Upper explosivity limit (UEL) (volume %)	10.1

Behaviour at sea

Additional data

Colour	colourless
Odour	ammonia, fish odour
Standard behavior classification	DE

Transportation data

Transport mode	Bulk, Packaged
Package group	II
State	liquid
Family name	aliphatic amines
IMO class	3.1

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	No
Metal(s) and alloys	No
Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Skin irritation/corrosivity (D1)	3C - Corrosive
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	DE - Dissolver/Evaporator
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

IDHL	2000
TLV-TWA	10
TEEL-1 (mg/m3)	15 ppm
TEEL-2 (mg/m3)	75 ppm
TEEL-3 (mg/m3)	200 ppm

Ecotoxicity

DIETHYLBENZENE

UN Number: 2049 - CAS Number: 25340-17-4

Also known as: DIETHYLBENZENES

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number	2049
CAS number	25340-17-4

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	860 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	134.21
Density of gas (kg/m ³)	5.96
Boiling Point (°C)	180
Melting Point (°C)	-57
Vapour Pressure (Pa)	133 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	423
Flash Point (°C)	56
Upper explosivity limit (UEL) (volume %)	12.8

Behaviour at sea

Additional data

Colour	colourless
Odour	sweet, gasoline odour

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	32
State	liquid
Temperature (°C)	ambient

Pressure (Pa)	ambient
Family name	aromatic hydrocarbons
IMO class	3.3

Reactivity data

Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	4 - ≥ 4 and < 5
Bioaccumulation in BCF (A1B)	4 - ≥ 500 and < 4000
Bioaccumulation (A1)	4 - High potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	F - Floating substance, not likely to evaporate or to dissolve quickly
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

ERPG-1 (ppm)	10
ERPG-2 (ppm)	100
ERPG-3 (ppm)	500

Ecotoxicity

DIETHYLENE GLYCOL

CAS Number: 111-46-6

Also known as: CELLOSOHE (T), DEG (T), DICOL (T), DIGLYCOL, DIHYDROXYDIETHYL ETHER, 2,2'-Oxybisethanol, 2,2'-Oxydiethanol, Bis(2-Hydroxyethyl) Ether, Ethanol, 2,2'-Oxybis-, 2-Hydroxyethyl Ether, Diethylene Glycol

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number	111-46-6
Formula	C ₄ H ₁₀ O ₃

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	1118 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	32.2 [cSt] at a temperature of 20°C 32.2 [cSt] at a temperature of 25°C
Molar mass (g/mol)	106.12
Density of gas (kg/m ³)	4.72
Solubility (g/L)	1120000 [g/L] at a temperature of 20°C and salinity of 0% 1120000 [g/L] at a temperature of 25°C and salinity of 0%
Boiling Point (°C)	245
Melting Point (°C)	-6
Critical temperature (°C)	750
Critical pressure (Pa)	4700000
Surface tension (mN/m)	45.21 [mN/m] at a temperature of 20°C 44.77 [mN/m] at a temperature of 25°C
Ignition Temperature (°C)	225
Flash Point (°C)	124
Flash Point (Pensky-Martens closed cup) (°C)	124
Lower explosivity limit (LEL) (volume %)	1.6
Upper explosivity limit (UEL) (volume %)	10.8
Vapor enthalpy (J/Kg)	492745 [J/Kg] at a temperature of 246°C
Combustion enthalpy (J/Kg)	20300000

Specific heat capacity (J/(Kg·K))	2306.4
Combustion efficiency (%)	98
Mass flow rate of the combustion surface (Kg/(m ² ·s))	0.02
Rad fraction (%)	22
Henry's constant (mol/(m ³ ·Pa))	0

Behaviour at sea

Log kow	-1.47
Log koc	0.55
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Bioconcentration factor (BCF)	1

Additional data

Colour	colourless
Odour	odourless

MARPOL pollution category	Category	Description
	Z	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment.

Transportation data

Cargo group	40
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	glycol ethers

Reactivity data

Abilities	Miscible in water.
Acid(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible

Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold



Hazard statements	Health
	H302 Harmful if swallowed.
	H373 May cause damage to organs through prolonged or repeated exposure, exposure cause the hazard:
TLV-TWA	100
TEEL-1 (mg/m3)	40 ppm
TEEL-2 (mg/m3)	200 ppm
TEEL-3 (mg/m3)	200ppm

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	> 1000
Lowest median lethal concentration (LC50) on crustacean (mg/l)	48900
Lowest median lethal concentration (LC50) on fishes (mg/l)	77900
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	8590
Highest no observed effect concentration (NOEC) on fishes (mg/l)	15380
Assessment factor (AF)	1000 on the short term 10000 on the long term
Predicted No Effect Concentration (PNEC) (µg/l)	1000 [µg/l] on the short term 100 [µg/l] on the long term

DIETHYLENE GLYCOL DI-n-BUTYL ETHER

CAS Number: 112-73-2

Also known as: BIS(2-BUTOXYETHYL)ETHER, BUTYLDIGLYME, 2,2'-DIBUTOXYETHYL ETHER, DIBUTYL CARBITOL, DIETHYLENE GLYCOL DIBUTYL ETHER

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 112-73-2

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	885 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	218.34
Density of gas (kg/m ³)	> 1.29
Boiling Point (°C)	256
Melting Point (°C)	-60
Flash Point (°C)	48

Behaviour at sea

Additional data

Colour	colourless
Odour	characteristic
Standard behavior classification	F/FD/D

Transportation data

Cargo group	40
State	liquid
Temperature (°C)	ambient
Family name	glycol ethers

Reactivity data

Water	No
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Acid(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	2 - ≥ 2 and < 3
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	FD - Floater/Dissolver
Effects on wildlife and bottom habitats (E3)	1 - Is a floater; and/or is slightly acutely toxic; and/or is mildly irritant to skin and/or eyes

Human toxicity threshold

Ecotoxicity

DIETHYLENE GLYCOL DIETHYL ETHER

CAS Number: 112-36-7

Also known as: DETHYL CARBITOL

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

CAS number 112-36-7

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	900 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	162.2
Density of gas (kg/m ³)	7.22
Boiling Point (°C)	188
Melting Point (°C)	-44
Vapour Pressure (Pa)	70 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	205
Flash Point (°C)	82

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless

Transportation data

Cargo group	40
State	liquid
Family name	glycol ethers

Reactivity data

Water	No
Acid(s)	Yes

Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

TEEL-1 (mg/m3)	250
TEEL-2 (mg/m3)	500
TEEL-3 (mg/m3)	500

Ecotoxicity

DIETHYLENE GLYCOL MONOBUTYL ETHER ACETATE

Also known as: ACETATE DE L'ETHER MONOBUTYLIQUE DU DIETHYLENE GLYCOL, 2-(2-BUTOXYETHOXY) ETHYL ACETATE, BUTYL CARBITOL ACETATE, DIGLYCOL MONOBUTYL ETHER ACETATE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	985 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	204.3
Boiling Point (°C)	246
Melting Point (°C)	-32
Vapour Pressure (Pa)	13 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	290
Flash Point (°C)	105
Lower explosivity limit (LEL) (volume %)	0.6
Upper explosivity limit (UEL) (volume %)	10.7

Behaviour at sea

Persistence (days)	0.8
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Additional data

Colour	colourless
Odour	mild odour
Standard behavior classification	D, FD, F

Transportation data

Cargo group	34
State	liquid
Temperature (°C)	ambient

Pressure (Pa)	ambient
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Family name	esters
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Reactivity data

Acid(s)	Yes
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Oxidizing agents	Yes
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GESAMP Hazard profile

Human toxicity threshold

Ecotoxicity

DIETHYLENE GLYCOL MONOMETHYL ETHER

Also known as: DIGLYCOL MONOMETHYL ETHER

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	990 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	134.2
Density of gas (kg/m ³)	5.934
Boiling Point (°C)	194
Melting Point (°C)	-65
Vapour Pressure (Pa)	13 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	215
Flash Point (°C)	91
Lower explosivity limit (LEL) (volume %)	1.6
Upper explosivity limit (UEL) (volume %)	16.1

Behaviour at sea

Additional data

Colour	colourless
Odour	pleasant odour

Transportation data

Cargo group	40
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	glycol ethers

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	No
Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	Yes

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m3)	0.35 ppm
TEEL-2 (mg/m3)	0.35 ppm
TEEL-3 (mg/m3)	0.35 ppm

Ecotoxicity

DIETHYLENE GLYCOL PHTHALATE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1150 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	254.23
Boiling Point (°C)	> 240
Melting Point (°C)	< -20
Vapour Pressure (Pa)	< 4000 [Pa] at a temperature of 20°C
Flash Point (°C)	93.3

Behaviour at sea

Additional data

Colour	pale yellow
Odour	odourless
Standard behavior classification	S/SD

Transportation data

Cargo group	34
State	liquid
Temperature (°C)	ambient
Family name	esters

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	2 - ≥2 and <3
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Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

DIETHYLENETRIAMINE

UN Number: 2079 - CAS Number: 111-40-0

Also known as: BIS(2-AMINOETHYL)AMINE, 2,2-DIAMINODIETHYLAMINE

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number	2079
CAS number	111-40-0

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	954 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	103.17
Density of gas (kg/m ³)	4.515
Boiling Point (°C)	207
Melting Point (°C)	-39
Vapour Pressure (Pa)	50 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	395
Flash Point (°C)	102
Upper explosivity limit (UEL) (volume %)	10

Behaviour at sea

Additional data

Colour	colourless to yellow
Odour	ammonia odour

Transportation data

Transport mode	Bulk, Packaged
Package group	II
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient

Family name	aliphatic amines
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Reactivity data

Acid(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	1 - ≥1 and <10
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	3 - Moderately high
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	FD - Floater/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TEEL-1 (mg/m3)	1 ppm
TEEL-2 (mg/m3)	1.25 ppm
TEEL-3 (mg/m3)	100 ppm

Ecotoxicity

DIETHYLETHANOLAMINE

UN Number: 2686

Also known as: DIETHYLAMINOETHANOL, N-DIETHYLAMINOETHANOL, 2-DIETHYLAMINOETHANOL, beta-DIETHYLAMINOETHYLALCOHOL, DIETHYL(2-HYDROXYETHYL)AMINE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 2686

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	900 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	117.2
Density of gas (kg/m ³)	5.16
Boiling Point (°C)	161
Melting Point (°C)	-70
Vapour Pressure (Pa)	190 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	320
Flash Point (°C)	60
Lower explosivity limit (LEL) (volume %)	6.7
Upper explosivity limit (UEL) (volume %)	11.7

Behaviour at sea

Additional data

Colour	colourless
Odour	characteristic

Transportation data

Transport mode	Bulk, Packaged
Package group	II
State	liquid
Family name	alkanolamines

Reactivity data

Acid(s)	Yes
Metal(s) and alloys	Yes (light metals, Cu)
Oxidizing agents	Yes
Combustibles	Yes

GESAMP Hazard profile

Biodegradation (A2) NR - Not readily biodegradable

Human toxicity threshold

TLV-TWA	10
TEEL-1 (mg/m3)	10 ppm
TEEL-2 (mg/m3)	20 ppm
TEEL-3 (mg/m3)	100 ppm

Ecotoxicity

DIHEPTYL PHTHALATE

CAS Number: 3648-21-3

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 3648-21-3

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	988 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	362.51
Boiling Point (°C)	360
Melting Point (°C)	-46
Flash Point (°C)	224

Behaviour at sea

Additional data

Colour	white
Odour	odourless
Standard behavior classification	F/FE/E

Transportation data

Cargo group	34
State	liquid
Temperature (°C)	ambient
Family name	esters

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - $e < 1$, or $> ca. 7$, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	4 - ≥ 500 and < 4000
Bioaccumulation (A1)	4 - High potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	Fp - Persistent slick forming substance
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

Ecotoxicity

DIHEXYL PHTHALATE

CAS Number: 84-75-3

Also known as: 1,2-BENZENEDICARBOXYLIC ACID, DIHEXYL ESTER, DI-n-HEXYL PHTHALATE

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

CAS number 84-75-3

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	995 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	334.5
Boiling Point (°C)	> 210 (666 Pa)
Melting Point (°C)	-58
Flash Point (°C)	176

Behaviour at sea

Additional data

Transportation data

Cargo group	34
State	liquid
Family name	esters

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	5 - ≥ 5 and \leq ca.7
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Bioaccumulation (A1)	5 - Very high potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	2 - Moderate
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	Fp - Persistent slick forming substance
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

Ecotoxicity

DIISOBUTYL KETONE

UN Number: 1157 - CAS Number: 108-83-8

Also known as: DIBK (T), DIISOBUTYLKETONE, S-DIISOPROPYLACETONE, sym-DI ISOPROPYL ACETONE, 2,6-DIMETHYL-4-HEPTANONE, 2,6-DIMETHYL-HEPTAN-4-ONE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1157
CAS number	108-83-8

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	806 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	142.23
Density of gas (kg/m ³)	2.451
Boiling Point (°C)	163
Melting Point (°C)	-42
Vapour Pressure (Pa)	227 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	396
Flash Point (°C)	49
Lower explosivity limit (LEL) (volume %)	0.81
Upper explosivity limit (UEL) (volume %)	7.1

Behaviour at sea

Additional data

Colour	colourless
Odour	mild sweet odour
Standard behavior classification	D, FD, F

Transportation data

Package group	III
Cargo group	18

State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	ketones
IMO class	3.3

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	No
Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	3 - ≥ 3 and < 4
Bioaccumulation (A1)	3 - Moderate potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	F - Floating substance, not likely to evaporate or to dissolve quickly
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

IDHL	2000
TLV-TWA	25
TEEL-1 (mg/m3)	50 ppm
TEEL-2 (mg/m3)	50 ppm
TEEL-3 (mg/m3)	500 ppm

Ecotoxicity

DIISOBUTYL PHTHALATE

CAS Number: 84-69-5

Also known as: 1,2-BENZENE DICARBOXYLIC ACID, DI(-2-METHYLPROPYL)ESTER

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

CAS number 84-69-5

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1047 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	278.35
Density of gas (kg/m ³)	12.37
Boiling Point (°C)	298
Melting Point (°C)	-64
Vapour Pressure (Pa)	10 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	432
Flash Point (°C)	196
Lower explosivity limit (LEL) (volume %)	0.4

Behaviour at sea

Additional data

Colour	colourless
Odour	slight ester

Transportation data

Cargo group	34
State	liquid
Family name	esters

Reactivity data

Water	No
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Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	4 - ≥ 4 and < 5
Bioaccumulation in BCF (A1B)	4 - ≥ 500 and < 4000
Bioaccumulation (A1)	4 - High potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	1 - Low
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	0 - Not irritating
Eye irritation/corrosivity (D2)	0 - Not irritating
Specific Health Concern (D3)	R - Reprotoxicity
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

Ecotoxicity

DIISOBUTYLAMINE

UN Number: 2361 - CAS Number: 110-96-3

Also known as: N,N,-BIS(2-METHYLPROPYL)AMINE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2361
CAS number	110-96-3

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	745 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	129.25
Density of gas (kg/m ³)	5.75
Boiling Point (°C)	139.5
Melting Point (°C)	-70
Vapour Pressure (Pa)	< 1475 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	290
Flash Point (°C)	29

Behaviour at sea

Additional data

Colour	colourless
Odour	ammonia-like
Standard behavior classification	FED

Transportation data

Transport mode	Bulk, Packaged
Package group	III
State	liquid
Temperature (°C)	ambient
Family name	aliphatic amines

IMO class	3.3
Reactivity data	
Water	No
Acid(s)	Yes
Base(s)	No
Metal(s) and alloys	Yes (Al, Cu, Zn)
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	2 - ≥ 2 and < 3
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	3 - Corrosive
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	FED - Floater/Evaporator/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TEEL-1 (mg/m3)	0.6 ppm
TEEL-2 (mg/m3)	4 ppm
TEEL-3 (mg/m3)	20 ppm

Ecotoxicity

DIISOBUTYLENE

UN Number: 2050 - CAS Number: 11071-47-9

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2050
CAS number	11071-47-9

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	700 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	112.22
Density of gas (kg/m ³)	5.16
Boiling Point (°C)	102
Melting Point (°C)	-100
Vapour Pressure (Pa)	4826 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	305
Flash Point (°C)	-5
Lower explosivity limit (LEL) (volume %)	0.9 (E)

Behaviour at sea

Additional data

Colour	colourless
Odour	gasoline-like

Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	30
State	liquid
Temperature (°C)	ambient
Family name	olefins
IMO class	3.2

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	No
Metal(s) and alloys	Yes
Static electricity	Yes
Oxidizing agents	Yes
Combustibles	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	4 - ≥ 4 and < 5
Bioaccumulation in BCF (A1B)	4 - ≥ 500 and < 4000
Bioaccumulation (A1)	4 - High potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Eye irritation/corrosivity (D2)	0 - Not irritating
Interference with coastal amenities (E2)	FE - Floater/Evaporator
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

DIISODECYL PHTHALATE

CAS Number: 26761-40-0

Also known as: 1,2-BENZENE DICARBOXYLIC ACID DILSODECYLESTER, BIS (ISO-DECYL) PHTHALATE, BIS (8-METHYL NONYL) ESTER, DI ALKYL (C7-C13) PHTHALATE, DISODECYL ESTER

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 26761-40-0

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	967 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	446.7
Melting Point (°C)	-50
Ignition Temperature (°C)	402
Flash Point (°C)	229
Lower explosivity limit (LEL) (volume %)	0.3
Upper explosivity limit (UEL) (volume %)	264

Behaviour at sea

Additional data

Colour	colourless
Odour	weak odour

Transportation data

Cargo group	34
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	esters

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	No
Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	0 - Not irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	Fp - Persistent slick forming substance
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

DIISONONYL ADIPATE

CAS Number: 33703-08-1

Also known as: ADIPATE DE DIISONONYLE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 33703-08-1

Physical chemical data

Physical State (20°C) Liquid

Molar mass (g/mol) 398.63

Behaviour at sea

Additional data

Colour colourless

Odour odourless

Transportation data

Cargo group 34

State liquid

Temperature (°C) ambient

Family name esters

Reactivity data

Water No

Acid(s) Yes

Oxidizing agents Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A) 0 - e <1, or > ca.7, or Mol. Wt. > 1000

Bioaccumulation (A1) 0 - No potential to bioaccumulate

Biodegradation (A2) R - Readily biodegradable

Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	Fp - Persistent slick forming substance
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

Diisononyl Phthalate

CAS Number: 28553-12-0

Also known as: 1,2-Benzenedicarboxylic Acid, 1,2-Diisononyl Ester, Diisononyl Phthalate, Phtalate De Diisononyle

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number	28553-12-0
Formula	C ₂₆ H ₄₂ O ₄

Physical chemical data

Physical State (25°C)	Liquid
Kinematic viscosity (cSt)	82.47 [cSt] at a temperature of 20°C
Molar mass (g/mol)	418.609
Solubility (g/L)	0.2 [g/L] at a temperature of 20°C and salinity of 0‰
Boiling Point (°C)	432
Melting Point (°C)	-42
Flash Point (Pensky-Martens closed cup) (°C)	221
Henry's constant (mol/(m ³ ·Pa))	0.15

Behaviour at sea

Log k _{ow}	9.37
Log k _{oc}	5.52
Biodegradation in estuary environment (Half-life) (days)	1242
Bioconcentration factor (BCF)	230

Additional data

MARPOL pollution category

Category	Description
Other Substances	Substances which have been evaluated and found to fall outside Category X, Y or Z because they are considered to present no harm to marine resources, human health, amenities or other legitimate uses of the sea when discharged into the sea from tank cleaning of deballasting operations. The discharge of bilge or ballast water or other residues or mixtures containing these substances are not subject to any requirements of MARPOL Annex II.

Transportation data

Reactivity data

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - $e < 1$, or $> ca.7$, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	0 - Not irritating
Eye irritation/corrosivity (D2)	0 - Not irritating
Interference with coastal amenities (E2)	Fp - Persistent slick forming substance
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

Lowest median lethal concentration (LC50) on fishes (mg/l)	0.42
Highest no observed effect concentration (NOEC) on algae (mg/l)	1.8
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	0.004
Highest no observed effect concentration (NOEC) on fishes (mg/l)	75

DIISOCTYL ACID PHOSPHATE

UN Number: 1902

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1902

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	977 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	322.4

Behaviour at sea

Additional data

Colour	light yellow
Odour	odourless

Transportation data

Transport mode	Bulk, Packaged
Package group	III
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient

Reactivity data

Water	No
Acid(s)	No
Base(s)	No
Metal(s) and alloys	Yes
Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m3)	25
TEEL-2 (mg/m3)	150
TEEL-3 (mg/m3)	500

Ecotoxicity

DIISOPROPANOLAMINE

CAS Number: 110-97-4

Also known as: DIPA, DIPROPYL-2,2-DIHYDROXYAMINE

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

CAS number 110-97-4

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	990 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	133.19
Density of gas (kg/m ³)	5.92
Boiling Point (°C)	248
Melting Point (°C)	42
Ignition Temperature (°C)	374
Flash Point (°C)	127
Lower explosivity limit (LEL) (volume %)	1.1
Upper explosivity limit (UEL) (volume %)	5.4

Behaviour at sea

Additional data

Colour	colourless,white to yellow
Odour	ammonia, dead fish odour

Transportation data

State	liquid, solid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	alkanolamines

Reactivity data

Acid(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	FD - Floater/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

Ecotoxicity

DIISOPROPYL ETHER

UN Number: 1159 - CAS Number: 108-20-3

Also known as: DIISOPROPYL OXIDE

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number	1159
CAS number	108-20-3

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	724 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	102.2
Density of gas (kg/m ³)	7.095
Boiling Point (°C)	68
Melting Point (°C)	-86
Vapour Pressure (Pa)	18000 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	435
Flash Point (°C)	-28
Upper explosivity limit (UEL) (volume %)	21

Behaviour at sea

Additional data

Colour	colourless
Odour	sweet odour

Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	41
State	liquid
Temperature (°C)	ambient

Pressure (Pa)	under pressure
Family name	ethers
IMO class	3.1

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	No
Metal(s) and alloys	No
Static electricity	Yes
Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	E - Evaporator
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

IDHL	10000
TLV-TWA	500
TEEL-1 (mg/m3)	310 ppm
TEEL-2 (mg/m3)	310 ppm
TEEL-3 (mg/m3)	1400 ppm

Ecotoxicity

DIISOPROPYLAMINE

UN Number: 1158 - CAS Number: 108-18-9

Also known as: DIPA

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number	1158
CAS number	108-18-9

Physical chemical data

Density (kg/m ³)	717 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	101.19
Density of gas (kg/m ³)	4.5
Boiling Point (°C)	84
Melting Point (°C)	-61
Vapour Pressure (Pa)	9331 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	275
Flash Point (°C)	-15
Lower explosivity limit (LEL) (volume %)	0.8
Upper explosivity limit (UEL) (volume %)	7.1

Behaviour at sea

Additional data

Colour	colourless
Odour	fish odour

Transportation data

Transport mode	Bulk, Packaged
Package group	II
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient

Family name	aliphatic amines
IMO class	3.2

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	No
Metal(s) and alloys	No
Static electricity	Yes
Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	3 - Corrosive
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	ED - Evaporator/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

IDHL	1000
TEEL-1 (mg/m3)	6 ppm
TEEL-2 (mg/m3)	40 ppm
TEEL-3 (mg/m3)	200 ppm

Ecotoxicity

DIMETHYL ACETAMIDE

CAS Number: 127-19-5

Also known as: ACETIC ACID, DIMETHYLAMIDE, DIMETHYLACETAMIDE, N,N-DIMETHYLACETAMIDE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 127-19-5

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	900 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	87.14
Density of gas (kg/m ³)	3.87
Boiling Point (°C)	164
Melting Point (°C)	-20
Vapour Pressure (Pa)	170 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	490
Flash Point (°C)	66
Upper explosivity limit (UEL) (volume %)	11.5

Behaviour at sea

Additional data

Colour	colourless
Odour	weak fishy

Transportation data

Cargo group	10
State	liquid
Temperature (°C)	ambient
Family name	amides

Reactivity data

Water	Yes
Acid(s)	Yes
Oxidizing agents	Yes
Combustibles	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

IDHL	300
TLV-TWA	10
TEEL-1 (mg/m3)	75 ppm
TEEL-2 (mg/m3)	300 ppm
TEEL-3 (mg/m3)	300 ppm

Ecotoxicity

DIMETHYL ADIPATE

CAS Number: 627-93-0

Also known as: ADIPATE DE DIMETHYLE, ADIPIC ACID, DIMETHYL ESTER, DIMETHYLHEXANEDIOATE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 627-93-0

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1063 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	174.2
Density of gas (kg/m ³)	7.74
Boiling Point (°C)	109/110
Vapour Pressure (Pa)	10 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	360
Flash Point (°C)	107
Lower explosivity limit (LEL) (volume %)	0.81
Upper explosivity limit (UEL) (volume %)	8.1

Behaviour at sea

Additional data

Colour	colourless
Odour	sweet

Transportation data

Cargo group	34
Temperature (°C)	ambient
Family name	esters

Reactivity data

Water	No
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Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	SD - Sinker/Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

DIMETHYL GLUTARATE

CAS Number: 26717-67-9

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 26717-67-9

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1087 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	160.17
Density of gas (kg/m ³)	7.12
Boiling Point (°C)	93/95
Flash Point (°C)	103

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless

Transportation data

Cargo group	34
Temperature (°C)	ambient
Family name	esters

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate

Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	3 - Corrosive
Eye irritation/corrosivity (D2)	2 - Irritating
Specific Health Concern (D3)	A - Aspiration
Interference with coastal amenities (E2)	SD - Sinker/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

Ecotoxicity

DIMETHYL HYDROGEN PHOSPHITE

CAS Number: 868-89-9

Also known as: DIMETHYL PHOSPHITE, DIMETHYLPHOSPHONATE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 868-89-9

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1200 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	110.05
Density of gas (kg/m ³)	4.89
Boiling Point (°C)	170/171
Melting Point (°C)	<-60
Vapour Pressure (Pa)	135 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	237
Flash Point (°C)	70
Lower explosivity limit (LEL) (volume %)	5.8
Upper explosivity limit (UEL) (volume %)	38.1

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless

Transportation data

Cargo group	34
Temperature (°C)	ambient
Family name	esters

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	1 - Is a floater; and/or is slightly acutely toxic; and/or is mildly irritant to skin and/or eyes

Human toxicity threshold

Ecotoxicity

DIMETHYL PHTHALATE

CAS Number: 131-11-3

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 131-11-3

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1190 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	194.2
Density of gas (kg/m ³)	8.63
Boiling Point (°C)	284
Melting Point (°C)	5.5
Vapour Pressure (Pa)	800 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	491
Flash Point (°C)	146
Lower explosivity limit (LEL) (volume %)	0.9

Behaviour at sea

Additional data

Colour	colourless to pale yellow
Odour	odourless
Standard behavior classification	SD

Transportation data

Cargo group	34
Family name	esters

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	2 - ≥ 2 and < 3
Bioaccumulation in BCF (A1B)	2 - ≥ 10 and < 100
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	0 - Not irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	SD - Sinker/Dissolver
Effects on wildlife and bottom habitats (E3)	1 - Is a floater; and/or is slightly acutely toxic; and/or is mildly irritant to skin and/or eyes

Human toxicity threshold

IDHL	248
TEEL-1 (mg/m3)	15
TEEL-2 (mg/m3)	75
TEEL-3 (mg/m3)	500

Ecotoxicity

DIMETHYL SUCCINATE

CAS Number: 106-65-0

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 106-65-0

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1117 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	146.14
Density of gas (kg/m ³)	6.5
Boiling Point (°C)	200
Melting Point (°C)	18/19
Vapour Pressure (Pa)	41 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	365
Flash Point (°C)	85
Upper explosivity limit (UEL) (volume %)	8.5

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless
Standard behavior classification	S/SD/D

Transportation data

Cargo group	34
Temperature (°C)	ambient
Family name	esters

Reactivity data

Water	No
Acid(s)	Yes

Oxidizing agents	Yes
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GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	0 - Not irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	SD - Sinker/Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

TEEL-1 (mg/m3)	10 ppm
TEEL-2 (mg/m3)	75 ppm
TEEL-3 (mg/m3)	350 ppm

Ecotoxicity

DIMETHYLAMINE 40% solution in water

UN Number: 1160 - CAS Number: 124-40-3

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1160
CAS number	124-40-3

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	900 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	45.1 (pure)
Density of gas (kg/m ³)	2.06
Boiling Point (°C)	54
Melting Point (°C)	-37
Vapour Pressure (Pa)	28700 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	390
Flash Point (°C)	-18
Lower explosivity limit (LEL) (volume %)	2.6
Upper explosivity limit (UEL) (volume %)	12.3

Behaviour at sea

Additional data

Colour	colourless
Odour	dead fish
Standard behavior classification	DE

Transportation data

Transport mode	Bulk, Packaged
Package group	II
State	liquid
Temperature (°C)	ambient
Family name	aliphatic amines

IMO class	3.1
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Reactivity data

Water	No
Acid(s)	Yes
Metal(s) and alloys	Yes
Oxidizing agents	Yes
Combustibles	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	DE - Dissolver/Evaporator
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

IDHL	500
ERPG-1 (ppm)	0.6
ERPG-2 (ppm)	100
ERPG-3 (ppm)	350

Ecotoxicity

DIMETHYLAMINE anhydrous

UN Number: 1032 - CAS Number: 124-40-3

Also known as: DMA, N-Methylmethanamine, Dimethylamine Solutions (40%), Solutions De Dimethylamine (40%)

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1032
CAS number	124-40-3
Formula	C ₂ H ₇ N

Physical chemical data

Physical State (20°C)	Gas
Physical State (25°C)	Liquid
Density (kg/m ³)	2.064 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	1.8994 [cSt] at a temperature of 20°C
Molar mass (g/mol)	45.08
Density of gas (kg/m ³)	2.064
Solubility (g/L)	10000000 [g/L] at a temperature of 20°C and salinity of 0‰
Boiling Point (°C)	51.5
Melting Point (°C)	-92
Vapour Pressure (Pa)	28708 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	400
Flash Point (°C)	-18
Lower explosivity limit (LEL) (volume %)	2.8
Upper explosivity limit (UEL) (volume %)	14.4

Behaviour at sea

Log kow	-0.38
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Additional data

Colour	colourless
Odour	ammonia, dead fish odour

MARPOL pollution category	Category	Description
	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.
Standard behavior classification	GD	

Transportation data

Transport mode	Gas, Packaged
Ship type	2G, 2PG
State	liq. compr. gas
Temperature (°C)	ambient
Pressure (Pa)	under pressure
Family name	aliphatic amines
IMO class	2(2.1)

Reactivity data

Water	No
Abilities	Solution.
Acid(s)	Yes
Base(s)	No
Metal(s) and alloys	No
Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - $e < 1$, or $> ca.7$, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	ED - Evaporator/Dissolver

Effects on wildlife and bottom habitats (E3)

3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



IDHL	2000
Hazard statements	<p>Physical</p> <p>H224 Extremely flammable liquid and vapour.</p> <p>Health</p> <p>H302 Harmful if swallowed.</p> <p>H314 Causes severe skin burns and eye damage.</p> <p>H332 Harmful if inhaled.</p> <p>H335 May cause respiratory irritation.</p> <p>Environmental</p> <p>H412 Harmful to aquatic life with long lasting effects.</p>
Precautionary statements	<p>Prevention</p> <p>P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.</p> <p>P261 Avoid breathing dust/fume/gas/mist/vapours/spray.</p> <p>P273 Avoid release to the environment.</p> <p>P280 Wear protective gloves/protective clothing/eye protection/face protection.</p> <p>Response</p> <p>P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>Storage</p> <p>P410 + P403 Protect from sunlight. Store in a well-ventilated place.</p>
TLV-TWA	10
ERPG-1 (ppm)	0.6
ERPG-2 (ppm)	100
ERPG-3 (ppm)	350

Ecotoxicity

DIMETHYLCYCLOHEXYLAMINE

UN Number: 2264

Also known as: CYCLOHEXYLAMINE, N,N-DIMETHYL, n-DIMETHYLCYCLOHEXANAMINE, N,N-DIMETHYLCYCLOHEXYLAMINE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 2264

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	849 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	127.23
Density of gas (kg/m ³)	5.68
Boiling Point (°C)	162
Melting Point (°C)	-60
Vapour Pressure (Pa)	400 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	215
Flash Point (°C)	42
Lower explosivity limit (LEL) (volume %)	3.6
Upper explosivity limit (UEL) (volume %)	19

Behaviour at sea

Additional data

Colour	colourless
Odour	musky ammonia

Transportation data

Transport mode	Bulk, Packaged
Package group	II
Temperature (°C)	ambient
Family name	aliphatic amines

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Biodegradation (A2) NR - Not readily biodegradable

Human toxicity threshold

Ecotoxicity

DIMETHYLETHANOLAMINE

UN Number: 2051 - CAS Number: 108-01-0

Also known as: DEANOL, 2-(DIMETHYLAMINO)ETHANOL, beta-DIMETHYLAMINOETHYLALCOHOL, N,N-DIMETHYL-N-(2-HYDROXYETHYL)AMINE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2051
CAS number	108-01-0

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	887 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	89.14
Density of gas (kg/m ³)	4.13
Boiling Point (°C)	134.6
Melting Point (°C)	-58.6
Vapour Pressure (Pa)	< 700 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	295
Flash Point (°C)	41
Lower explosivity limit (LEL) (volume %)	1.6
Upper explosivity limit (UEL) (volume %)	11.9

Behaviour at sea

Additional data

Colour	colourless
Odour	amine

Transportation data

Transport mode	Bulk, Packaged
Package group	II
State	liquid

Temperature (°C)	ambient
Family name	alkanolamines

Reactivity data

Water	No
Acid(s)	Yes
Metal(s) and alloys	Yes (Cu, Zn)
Oxidizing agents	Yes
Combustibles	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	3 - Corrosive
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TEEL-1 (mg/m3)	35 ppm
TEEL-2 (mg/m3)	150 ppm
TEEL-3 (mg/m3)	150 ppm

Ecotoxicity

DIMETHYLPOLYSILOXANE

Also known as: DIMETHICONE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	980 [Kg/m ³] at a temperature of 20°C
Melting Point (°C)	-50
Flash Point (°C)	>110

Behaviour at sea

Additional data

Transportation data

State	liquid
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Reactivity data

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m ³)	25
TEEL-2 (mg/m ³)	150
TEEL-3 (mg/m ³)	500

Ecotoxicity

DIMETHYLZINC

UN Number: 1370

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1370

Physical chemical data

Physical State (20°C) Liquid

Boiling Point (°C) -227

Behaviour at sea

Additional data

Colour colourless

Odour odourless

Transportation data

State liquid

Temperature (°C) ambient

Pressure (Pa) under pressure

IMO class 4.2

Reactivity data

Water Yes

Acid(s) No

Base(s) No

Metal(s) and alloys No

Oxidizing agents No

Reducing agents No

Combustibles No

Organic substance No

GESAMP Hazard profile

Human toxicity threshold

Ecotoxicity

DINITROPHENOLS dry or wetted (with <15 wt% water)

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	1683 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	184.1
Density of gas (kg/m ³)	8.2

Behaviour at sea

Persistence (days)	3.1
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Additional data

Colour	yellow
Odour	sweet, musty odour

Transportation data

State	solid
Temperature (°C)	ambient
IMO class	1.1 D

Reactivity data

Water	No
Acid(s)	No
Base(s)	No
Metal(s) and alloys	No
Oxidizing agents	Yes
Reducing agents	No
Combustibles	Yes
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

IDHL	0.65
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TLV-TWA	0.03
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Ecotoxicity

DINITROSOBENZENE

UN Number: 406

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 406

Physical chemical data

Physical State (20°C) Solid

Density (kg/m³) 1580 [Kg/m³] at a temperature of 20°C

Behaviour at sea

Additional data

Standard behavior classification D, SD, S

Transportation data

State solid

IMO class 1.3 C

Reactivity data

Water No

Acid(s) No

Base(s) No

Metal(s) and alloys No

Oxidizing agents No

Reducing agents No

Combustibles No

Organic substance No

GESAMP Hazard profile

Human toxicity threshold

Ecotoxicity

DINITROTOLUENE solid

UN Number: 2038 - CAS Number: 25321-14-6

Also known as: DINITROPHENYL METHANE, DINITROTOLUOL, DNT

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2038
CAS number	25321-14-6

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	1379 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	182.1
Density of gas (kg/m ³)	8.09
Boiling Point (°C)	250
Melting Point (°C)	70
Ignition Temperature (°C)	400
Flash Point (°C)	212

Behaviour at sea

Additional data

Colour	yellow to red
Odour	weak odour

Transportation data

Transport mode	Bulk, Packaged
Package group	II
State	solid
Temperature (°C)	ambient
Pressure (Pa)	ambient
IMO class	6.1

Reactivity data

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	2 - ≥ 2 and < 3
Bioaccumulation in BCF (A1B)	2 - ≥ 10 and < 100
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	2 - Moderate
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Eye irritation/corrosivity (D2)	0 - Not irritating
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

IDHL	26
TLV-TWA	0.2
TEEL-1 (mg/m3)	0.6
TEEL-2 (mg/m3)	12.5
TEEL-3 (mg/m3)	50

Ecotoxicity

DINITROTOLUENES molten

UN Number: 2038 - CAS Number: 25321-14-6

Also known as: DNT

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2038
CAS number	25321-14-6

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	1259/1379 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	182.13
Density of gas (kg/m ³)	8.1
Boiling Point (°C)	decomp.
Melting Point (°C)	60/70
Flash Point (°C)	207

Behaviour at sea

Additional data

Colour	yellow to red
Odour	slight

Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	42
State	liquid
Family name	nitrocompounds
IMO class	6.1

Reactivity data

Water	No
Acid(s)	No
Base(s)	Yes
Metal(s) and alloys	Yes
Oxidizing agents	Yes
Reducing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	2 - ≥ 2 and < 3
Bioaccumulation in BCF (A1B)	2 - ≥ 10 and < 100
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	2 - Moderate
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Eye irritation/corrosivity (D2)	0 - Not irritating
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TEEL-1 (mg/m3)	0.6
TEEL-2 (mg/m3)	30
TEEL-3 (mg/m3)	50

Ecotoxicity

DINONYL PHTHALATE

CAS Number: 84-76-4

Also known as: DINONYL 1,2-BENZENEDICARBOXYLATE, DI-n-NONYL PHTHALATE

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

CAS number 84-76-4

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m³)	970 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	418.68
Density of gas (kg/m³)	18.62
Boiling Point (°C)	413
Flash Point (°C)	216

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless
Standard behavior classification	F/FE/E

Transportation data

Cargo group	34
Family name	esters

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	Fp - Persistent slick forming substance
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

DINOSEB

UN Number: 2779

Also known as: DINOSEB, DNBP

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 2779

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	1260 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	240.22
Melting Point (°C)	30/42
Flash Point (°C)	177

Behaviour at sea

Additional data

Colour orange to brown

Transportation data

Package group	I/II/III
Cargo group	42
State	solid
Family name	nitro compounds
IMO class	6.1

Reactivity data

Base(s)	Yes
Metal(s) and alloys	Yes (mild steel)

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m3)	2.5
TEEL-2 (mg/m3)	4.5
TEEL-3 (mg/m3)	10

Ecotoxicity

DIOCTYL ADIPATE

Also known as: ADIPATE DE DIOCTYLE, ADIPIC ACID BIS (2-ETHYL HEXYL ESTER), ADIPOL 2EH, BEHA, BIS (2-ETHYL HEXYL ADIPATE), DI-(2-ETHYL-HEXYL ADIPATE), DIOCTYL ADIPATE, DOA

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	928 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	371
Boiling Point (°C)	417
Melting Point (°C)	-67.8
Vapour Pressure (Pa)	347 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	340
Flash Point (°C)	196
Lower explosivity limit (LEL) (volume %)	0.3
Upper explosivity limit (UEL) (volume %)	2.8

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless
Standard behavior classification	D, FED, FE

Transportation data

State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m3)	150
TEEL-2 (mg/m3)	500
TEEL-3 (mg/m3)	500

Ecotoxicity

DIOCTYL PHTHALATE

CAS Number: 117-84-0

Also known as: o-BENZENE DICARBOXYLIC ACID DIOCTYL ESTER, 1,2-BENZENE DICARBOXYLIC ACID DIOCTYL ESTER, CELLUFLEX DOP, DEHP, DIETHYL HEXYL PHTHALATE, DI-(2-ETHYL-HEXYL) PHTHALATE, DINOPOLO NOP, DIOCTYL-o-BENZENE DICARBOXYLATE, DNOP, DOP, Bis(2-Ethylhexyl) Phthalate, Bis(2-Ethylhexyl)Phthalate, Diethylhexyl Phthalate, Bis(2-Ethylhexyl) 1,2-Benzenedicarboxylate, Di(2-Ethylhexyl)Phthalate, Di(2-Ethylhexyl) Orthophthalate, Dioctyl Phthalate, 1,2-Benzenedicarboxylic Acid, Bis(2-Ethylhexyl) Ester, Phthalic Acid, Bis(2-Ethylhexyl) Ester, Di-Sec-Octyl Phthalate

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number	117-84-0
Formula	C ₂₄ H ₃₈ O ₄

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	980 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	82.4 [cSt] at a temperature of 20°C 59 [cSt] at a temperature of 25°C
Molar mass (g/mol)	390.6
Solubility (g/L)	0 [g/L] at a temperature of 20°C and salinity of 0‰
Boiling Point (°C)	386
Melting Point (°C)	412
Critical temperature (°C)	835
Critical pressure (Pa)	1070000
Ignition Temperature (°C)	390
Flash Point (°C)	199
Flash Point (Pensky-Martens closed cup) (°C)	200
Flash Point (Cleveland open cup) (°C)	218
Lower explosivity limit (LEL) (volume %)	0.17
Combustion enthalpy (J/Kg)	28200000
Specific heat capacity (J/(Kg·K))	1804
Combustion efficiency (%)	70
Mass flow rate of the combustion surface (Kg/(m ² ·s))	0.03

Rad fraction (%)	30
Henry's constant (mol/(m ³ ·Pa))	4.43

Behaviour at sea

Log kow	7.5
Log koc	6
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Biodegradation in marine environment (Half-life) (days)	Not biodegradable
Bioconcentration factor (BCF)	2500

Additional data

Colour	colourless
Odour	weak odour

MARPOL pollution category	Category	Description
	X	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a major hazard to either marine resources or human health and, therefore, justify the prohibition of the discharge into the marine environment.

Transportation data

Cargo group	34
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	esters

Reactivity data

Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	4 - ≥500 and <4000
Bioaccumulation (A1)	4 - High potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight

Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	Fp - Persistent slick forming substance
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold



Hazard statements	Health
	H360 May damage fertility or the unborn child.
Precautionary statements	Prevention
	P201 Obtain special instructions before use.
	P281 Use personal protective equipment as required.
	Response
	P308 + P313 IF exposed or concerned: Get medical advice/attention.
TLV-TWA	0.3
TEEL-1 (mg/m3)	10
TEEL-2 (mg/m3)	75
TEEL-3 (mg/m3)	500

Ecotoxicity

Lowest median lethal concentration (LC50) on crustacean (mg/l)	0.511
Lowest median lethal concentration (LC50) on fishes (mg/l)	0.69
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	1
Highest no observed effect concentration (NOEC) on fishes (mg/l)	5

DIOXANE

UN Number: 1165 - CAS Number: 123-91-1

Also known as: DIOXANNE

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number	1165
CAS number	123-91-1

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1036 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	88.11
Density of gas (kg/m ³)	3.87
Boiling Point (°C)	101
Melting Point (°C)	10
Vapour Pressure (Pa)	4100 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	375
Flash Point (°C)	12
Upper explosivity limit (UEL) (volume %)	22.5

Behaviour at sea

Additional data

Colour	colourless
Odour	weak alcohol odour

Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	41
State	liquid
Temperature (°C)	ambient

Pressure (Pa)	ambient
Family name	ethers
IMO class	3.2

Reactivity data

Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

IDHL	2000
TLV-TWA	25
TEEL-1 (mg/m3)	17 ppm
TEEL-2 (mg/m3)	320 ppm
TEEL-3 (mg/m3)	760 ppm

Ecotoxicity

DIPENTENE

UN Number: 2052 - CAS Number: 138-86-3

Also known as: CAJEPUTENE, CINENE

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number	2052
CAS number	138-86-3

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	842 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	136.2
Density of gas (kg/m ³)	6.321
Boiling Point (°C)	178
Melting Point (°C)	-156
Vapour Pressure (Pa)	133 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	237
Flash Point (°C)	45
Lower explosivity limit (LEL) (volume %)	0.7
Upper explosivity limit (UEL) (volume %)	6.1

Behaviour at sea

Persistence (days)	0.8
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Additional data

Colour	colourless to light yellow
Odour	pleasant, lemon odour
Standard behavior classification	D, FD, F

Transportation data

Transport mode	Bulk, Packaged
Package group	III

State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
IMO class	3.3

Reactivity data

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	4 - ≥ 4 and < 5
Bioaccumulation (A1)	4 - High potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Specific Health Concern (D3)	Ss - Skin Sensitization
Interference with coastal amenities (E2)	F - Floating substance, not likely to evaporate or to dissolve quickly
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

Ecotoxicity

DIPHENYL

UN Number: 3077 - CAS Number: 92-52-4

Also known as: BIBENZENE, BIPHENYL, 1,1'-BIPHENYL, DIPHENYLE

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number	3077
CAS number	92-52-4

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	992 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	154.21
Density of gas (kg/m ³)	6.85
Boiling Point (°C)	255
Melting Point (°C)	69/72
Ignition Temperature (°C)	540
Flash Point (°C)	113
Lower explosivity limit (LEL) (volume %)	0.6
Upper explosivity limit (UEL) (volume %)	5.8

Behaviour at sea

Additional data

Colour	colourless to pale yellow
Odour	characteristic, aromatic

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	32
State	solid
Temperature (°C)	ambient

Family name	aromatic hydrocarbons
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Reactivity data

Water	No
Acid(s)	Yes
Base(s)	No
Metal(s) and alloys	No
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	3 - ≥ 3 and < 4
Bioaccumulation in BCF (A1B)	4 - ≥ 500 and < 4000
Bioaccumulation (A1)	4 - High potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	1 - Low
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	0 - Not irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly
Effects on wildlife and bottom habitats (E3)	1 - Is a floater; and/or is slightly acutely toxic; and/or is mildly irritant to skin and/or eyes

Human toxicity threshold

IDHL	15.6
TLV-TWA	0.2

Ecotoxicity

DIPHENYL ETHER

UN Number: 3082 - CAS Number: 101-84-8

Also known as: BIPHENYL OXIDE, DIPHENYL ETHER, DIPHENYL OXIDE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	3082
CAS number	101-84-8

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	1070 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	170.2
Density of gas (kg/m ³)	7.482
Boiling Point (°C)	257
Melting Point (°C)	27
Ignition Temperature (°C)	610
Flash Point (°C)	115
Lower explosivity limit (LEL) (volume %)	0.8
Upper explosivity limit (UEL) (volume %)	1.5

Behaviour at sea

Additional data

Colour	colourless
Odour	mild pleasant odour

Transportation data

State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient

Reactivity data

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	4 - ≥ 4 and < 5
Bioaccumulation in BCF (A1B)	4 - ≥ 500 and < 4000
Bioaccumulation (A1)	4 - High potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly
Effects on wildlife and bottom habitats (E3)	1 - Is a floater; and/or is slightly acutely toxic; and/or is mildly irritant to skin and/or eyes

Human toxicity threshold

TEEL-1 (mg/m3)	2 ppm
TEEL-2 (mg/m3)	20 ppm
TEEL-3 (mg/m3)	100 ppm

Ecotoxicity

DIPHENYLMETHANE-4,4'-DIISOCYANATE

UN Number: 2489 - CAS Number: 101-68-8

Also known as: DIISOCYANATE DE DIPHENYLMETHANE-4,4

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2489
CAS number	101-68-8

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	1200 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	250.3
Boiling Point (°C)	392
Melting Point (°C)	37
Ignition Temperature (°C)	240
Flash Point (°C)	196

Behaviour at sea

Persistence (days)	2.7
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Additional data

Colour	white to light yellow
Standard behavior classification	D, SD

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	12
State	solid
Temperature (°C)	-18 to 5
Pressure (Pa)	under pressure
Family name	isocyanates

Reactivity data

Water	Yes
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	No
Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	5 - ≥ 5 and \leq ca.7
Bioaccumulation in BCF (A1B)	2 - ≥ 10 and < 100
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	4 - High
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

IDHL	10
TLV-TWA	0.02
ERPG-1 (ppm)	0.2 mg
ERPG-2 (ppm)	2 mg
ERPG-3 (ppm)	25 mg

Ecotoxicity

DIPROPYLAMINE

UN Number: 2383 - CAS Number: 142-84-7

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2383
CAS number	142-84-7

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	738 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	101.19
Density of gas (kg/m ³)	4.386
Boiling Point (°C)	109
Melting Point (°C)	-100
Vapour Pressure (Pa)	4212 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	316
Lower explosivity limit (LEL) (volume %)	1.8
Upper explosivity limit (UEL) (volume %)	9.3

Behaviour at sea

Additional data

Colour	colourless
Odour	strong ammonia odour

Transportation data

Package group	II
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	aliphatic amines
IMO class	3.2

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	No
Metal(s) and alloys	No
Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	FED - Floater/Evaporator/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TEEL-1 (mg/m3)	50
TEEL-2 (mg/m3)	350
TEEL-3 (mg/m3)	500

Ecotoxicity

DIPROPYLENE GLYCOL

CAS Number: 110-98-5

Also known as: 2,2'-DIHYDROXYDIPROPYL ETHER, 2,2-DIHYDROXY ISOPROPYL ETHER

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

CAS number 110-98-5

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1023 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	134.17
Density of gas (kg/m ³)	2.103
Boiling Point (°C)	232
Melting Point (°C)	-30
Ignition Temperature (°C)	37
Flash Point (°C)	446
Lower explosivity limit (LEL) (volume %)	2.2
Upper explosivity limit (UEL) (volume %)	12.6

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless

Transportation data

Cargo group	40
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	glycol ethers

Reactivity data

Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - $e < 1$, or $> ca. 7$, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	1 - ≥ 1 and < 10
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	0 - Not irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	1 - Is a floater; and/or is slightly acutely toxic; and/or is mildly irritant to skin and/or eyes

Human toxicity threshold

Ecotoxicity

DITRIDECYL PHTHALATE

CAS Number: 119-06-2

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 119-06-2

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	951 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	530.8
Density of gas (kg/m ³)	23.61
Boiling Point (°C)	> 315.6
Melting Point (°C)	< -37
Flash Point (°C)	254

Behaviour at sea

Additional data

Colour	colourless
Odour	nearly odourless

Transportation data

Cargo group	34
State	liquid
Temperature (°C)	ambient
Family name	esters

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	Fp - Persistent slick forming substance
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

DODECYL ALCOHOL

CAS Number: 112-53-8

Also known as: DODECANOL, DODECANOL, 1-Dodecanol, Lauryl Alcohol, Dodecyl Alcohol, Alcool Dodecylque

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number	112-53-8
Formula	C ₁₂ H ₂₆ O

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	831 [Kg/m ³] at a temperature of 20°C 830.9 [Kg/m ³] at a temperature of 24°C
Kinematic viscosity (cSt)	22.63 [cSt] at a temperature of 20°C
Molar mass (g/mol)	186.33
Solubility (g/L)	1.9 [g/L] at a temperature of 20°C and salinity of 0‰ 4 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	259
Melting Point (°C)	24
Critical temperature (°C)	719.4
Critical pressure (Pa)	1994000
Surface tension (mN/m)	29.4 [mN/m] at a temperature of 24°C
Ignition Temperature (°C)	275
Flash Point (°C)	127
Flash Point (Pensky-Martens closed cup) (°C)	127
Lower explosivity limit (LEL) (volume %)	0.6
Upper explosivity limit (UEL) (volume %)	5.1
Vapor enthalpy (J/Kg)	487297 [J/Kg] at a temperature of 25°C
Combustion enthalpy (J/Kg)	39381108
Specific heat capacity (J/(Kg·K))	2351
Henry's constant (mol/(m ³ ·Pa))	2.25

Behaviour at sea

Log kow	5.3
Log koc	2.63
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Bioconcentration factor (BCF)	48

Additional data

Colour	colourless				
Odour	sweet				
MARPOL pollution category	<table border="1"> <thead> <tr> <th>Category</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Y</td> <td>Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.</td> </tr> </tbody> </table>	Category	Description	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.
Category	Description				
Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.				
Standard behavior classification	F/FE/E				

Transportation data

Cargo group	20
Temperature (°C)	ambient
Family name	alcohols, glycols

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	5 - ≥ 5 and \leq ca.7
Bioaccumulation in BCF (A1B)	2 - ≥ 10 and < 100
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	1 - Low
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	2 - Irritating

Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	Fp - Persistent slick forming substance
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold



Hazard statements	Health	
	H319	Causes serious eye irritation.
	Environmental	
	H400	Very toxic to aquatic life.
	H411	Toxic to aquatic life with long lasting effects.
Precautionary statements	Prevention	
	P264	Wash ... thoroughly after handling.
	P273	Avoid release to the environment.
	P280	Wear protective gloves/protective clothing/eye protection/face protection.
	Response	
	P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P337 + P313	If eye irritation persists: Get medical advice/attention.
	P391	Collect spillage.
	Disposal	
	P501	Dispose of contents/container to ...
TEEL-2 (mg/m3)	7.5	
TEEL-3 (mg/m3)	500	

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	0.97
Lowest median lethal concentration (LC50) on crustacean (mg/l)	320
Lowest median lethal concentration (LC50) on fishes (mg/l)	894
Highest no observed effect concentration (NOEC) on algae (mg/l)	0.085
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	1
Assessment factor (AF)	50 on the short term
Predicted No Effect Concentration (PNEC) (µg/l)	0 [µg/l] on the short term

DODECYL METHACRYLATE

Also known as: METHACRYLATE DE DODECYLE, DODECYL-2-METHYL-2-PROPENOATE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	868 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	254.42
Density of gas (kg/m ³)	11.35
Melting Point (°C)	-22.2
Flash Point (°C)	> 110

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless
Standard behavior classification	F/FE/E

Transportation data

Cargo group	14
State	liquid
Temperature (°C)	ambient
Family name	acrylates

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes
Reducing agents	Yes

GESAMP Hazard profile

Biodegradation (A2)

NR - Not readily biodegradable

Human toxicity threshold

TEEL-1 (mg/m3)	15 ppm
TEEL-2 (mg/m3)	100 ppm
TEEL-3 (mg/m3)	500 ppm

Ecotoxicity

DODECYL XYLENE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Density (kg/m ³)	880 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	274.49
Boiling Point (°C)	299
Vapour Pressure (Pa)	666 (21°C) [Pa] at a temperature of 20°C
Ignition Temperature (°C)	high
Flash Point (°C)	140

Behaviour at sea

Additional data

Standard behavior classification	FE
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Transportation data

Cargo group	32
Family name	aromatic hydrocarbons

Reactivity data

Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Eye irritation/corrosivity (D2)	1 - Mildly irritating

Interference with coastal amenities (E2)	Fp - Persistent slick forming substance
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

Dodecylbenzene

CAS Number: 123-01-3

Also known as: 1-Phenyldodecane, Laurylbenzene, Dodecylbenzene

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

CAS number	123-01-3
Formula	C ₁₈ H ₃₀

Physical chemical data

Physical State (25°C)	Liquid
Molar mass (g/mol)	246.431
Solubility (g/L)	0.041 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	328
Melting Point (°C)	3
Flash Point (Pensky-Martens closed cup) (°C)	141
Vapor enthalpy (J/Kg)	351417 [J/Kg] at a temperature of 25°C
Henry's constant (mol/(m ³ ·Pa))	91.1

Behaviour at sea

Log k _{ow}	5.7
Log k _{oc}	5.26
Bioconcentration factor (BCF)	35

Additional data

MARPOL pollution category	Category	Description
	Z	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment.

Transportation data

Reactivity data

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	ED - Evaporator/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

Ecotoxicity

Lowest median lethal concentration (LC50) on crustacean (mg/l)	0.009
Lowest median lethal concentration (LC50) on fishes (mg/l)	796

DODECYLPHENOL

UN Number: 3145 - CAS Number: 27193-86-8

Also known as: p-DODECYLPHENOL

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	3145
CAS number	27193-86-8

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	940 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	262.44
Boiling Point (°C)	154/168
Vapour Pressure (Pa)	0.005 (25°C) [Pa] at a temperature of 20°C
Flash Point (°C)	163

Behaviour at sea

Additional data

Colour	straw coloured
Odour	phenolic
Marine pollutant	P

Transportation data

Transport mode	Bulk, Packaged
Package group	I/II/III
Cargo group	21
Temperature (°C)	ambient
Family name	phenols, cresols

Reactivity data

Water	No
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Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	4 - ≥500 and <4000
Bioaccumulation (A1)	4 - High potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	Fp - Persistent slick forming substance
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TEEL-1 (mg/m3)	25
TEEL-2 (mg/m3)	150
TEEL-3 (mg/m3)	500

Ecotoxicity

DOWTHERM

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1060 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	166
Density of gas (kg/m ³)	6.837
Boiling Point (°C)	257
Melting Point (°C)	12
Vapour Pressure (Pa)	650 [Pa] at a temperature of 20°C
Flash Point (°C)	401
Lower explosivity limit (LEL) (volume %)	0.8
Upper explosivity limit (UEL) (volume %)	3.3

Behaviour at sea

Additional data

Colour	light to dark brown
Odour	fragrant odour
Standard behavior classification	D, SD, S

Transportation data

State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

Ecotoxicity

ENDRIN

UN Number: 2761

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 2761

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	1650 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	380.82
Melting Point (°C)	177
Lower explosivity limit (LEL) (volume %)	1.1

Behaviour at sea

Persistence (days) 3.1

Additional data

Colour	colourless to tan
Odour	odourless
Marine pollutant	P

Transportation data

Transport mode	Bulk, Packaged
State	solid
Temperature (°C)	ambient
Pressure (Pa)	ambient
IMO class	6.1

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

IDHL	125
TLV-TWA	0.006
TEEL-1 (mg/m3)	0.3

Ecotoxicity

EPICHLOROHYDRIN

UN Number: 2023 - CAS Number: 106-89-8

Also known as: 1-CHLORO-2,3-EPOXYPROPANE, 3-CHLORO-1,2-EPOXYPROPANE, 2-(CHLOROMETHYL)-OXIRANE, CHLOROMETHYLOXIRANE, CHLOROPROPYLENE OXIDE, 1,2-Epoxy-3-Chloropropane, 2-(Chloromethyl)Oxirane, 3-Chloro-1,2-Propylene Oxide, Alpha-Epichlorohydrin, Ech, Epichlorohydrine, Epichlorohydrin, Epichlorohydrine, α -Epichlorohydrin

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2023
CAS number	106-89-8
Formula	C ₃ H ₅ ClO

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	1180 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	0.87 [cSt] at a temperature of 20°C 0.91 [cSt] at a temperature of 25°C
Molar mass (g/mol)	92.53
Density of gas (kg/m ³)	4.244
Solubility (g/L)	64000 [g/L] at a temperature of 20°C and salinity of 0‰ 65900 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	115.4
Melting Point (°C)	-48
Critical molar volume (m ³ /mol)	0.000168
Surface tension (mN/m)	37 [mN/m] at a temperature of 20°C 36.36 [mN/m] at a temperature of 25°C
Vapour Pressure (Pa)	1730 [Pa] at a temperature of 20°C 2200 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	416
Flash Point (°C)	34
Flash Point (Pensky-Martens closed cup) (°C)	31
Flash Point (Cleveland open cup) (°C)	37.8
Lower explosivity limit (LEL) (volume %)	3.8

Upper explosivity limit (UEL) (volume %)	21
Vapor enthalpy (J/Kg)	410000 [J/Kg] at a temperature of 115°C
Combustion enthalpy (J/Kg)	17700000
Specific heat capacity (J/(Kg·K))	1422
Combustion efficiency (%)	55
Mass flow rate of the combustion surface (Kg/(m ² ·s))	0.04
Rad fraction (%)	35
Henry's constant (mol/(m ³ ·Pa))	2.8

Behaviour at sea

Log kow	0.26
Log koc	1.85
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Biodegradation in marine environment (Half-life) (days)	Not biodegradable
Bioconcentration factor (BCF)	0.66

Additional data

Colour	colourless
Odour	sweet, garlic odour

MARPOL pollution category	Category	Description
	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.

Transportation data

Package group	II
Cargo group	17
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	under pressure
Family name	epichlorohydrin
IMO class	6.1

Reactivity data

Water	Yes
Acid(s)	Yes
Base(s)	Yes

Oxidizing agents	Yes
Notable risks	Violent reactions. On combustion, forms toxic and corrosive fumes.

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - $e < 1$, or $> ca. 7$, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Skin irritation/corrosivity (D1)	3A - Corrosive
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



IDHL	250	
Hazard statements	Physical	
	H226	Flammable liquid and vapour.
	Health	
	H301	Toxic if swallowed.
	H311	Toxic in contact with skin.
	H314	Causes severe skin burns and eye damage.
	H317	May cause an allergic skin reaction.
	H331	Toxic if inhaled.
	H350	May cause cancer.

Precautionary statements	Prevention
	P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
	P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
	P280 Wear protective gloves/protective clothing/eye protection/face protection.
	Response
	P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
	P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
	P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
	P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P308 + P313 IF exposed or concerned: Get medical advice/attention.
	Storage
	P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
	Disposal
	P501 Dispose of contents/container to ...

ERPG-2 (ppm) 20

ERPG-3 (ppm) 100

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	24.2
Lowest median lethal concentration (LC50) on crustacean (mg/l)	8.87
Lowest median lethal concentration (LC50) on fishes (mg/l)	0.65
Highest no observed effect concentration (NOEC) on algae (mg/l)	10.7
Assessment factor (AF)	1000 on the short term 5000 on the long term
Predicted No Effect Concentration (PNEC) (µg/l)	0.65 [µg/l] on the short term 0.13 [µg/l] on the long term

ETHANE (compressed gas)

UN Number: 1035

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1035

Physical chemical data

Physical State (20°C)	Gas
Density (kg/m ³)	1.342 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	30.07
Density of gas (kg/m ³)	1.342
Boiling Point (°C)	-8.4
Melting Point (°C)	-183
Vapour Pressure (Pa)	3850000 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	515
Lower explosivity limit (LEL) (volume %)	2.9
Upper explosivity limit (UEL) (volume %)	13

Behaviour at sea

Additional data

Colour	colourless
Odour	mild gasoline odour

Transportation data

Transport mode	Gas, Packaged
Cargo group	31
State	liq.compr.gas
Temperature (°C)	-89
Pressure (Pa)	under pressure
Family name	paraffins
IMO class	2(2.1)

Reactivity data

Water

No

Static electricity

Yes

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m3)	3000 ppm
TEEL-2 (mg/m3)	5000 ppm
TEEL-3 (mg/m3)	25000 ppm

Ecotoxicity

ETHANE (refrigerated liquid)

UN Number: 1961

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1961

Physical chemical data

Physical State (20°C)	Gas
Density (kg/m ³)	1.342 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	30.07
Density of gas (kg/m ³)	1.342
Boiling Point (°C)	-8.4
Melting Point (°C)	-183
Vapour Pressure (Pa)	3850000 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	515
Lower explosivity limit (LEL) (volume %)	2.9
Upper explosivity limit (UEL) (volume %)	13.1

Behaviour at sea

Additional data

Colour	colourless
Odour	mild gasoline odour

Transportation data

Transport mode	Gas, Packaged
Ship type	2G
Cargo group	31
State	liquefied gas
Temperature (°C)	-89
Pressure (Pa)	under pressure
Family name	paraffins
IMO class	2(2.1)

Reactivity data

Water

No

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m3)	3001 ppm
TEEL-2 (mg/m3)	5001 ppm
TEEL-3 (mg/m3)	25001 ppm

Ecotoxicity

ETHANOL

UN Number: 1170 - CAS Number: 64-17-5

Also known as: ABSOLUTE ALCOHOL, AETHANOL, ALCOHOL, ALGRAIN, ANHYDOL, COLOGNE SPIRIT, Anhydrous Ethanol, Ethanol Denatured, Ethyl Alcohol, Ethyl Hydrate, Ethyl Hydroxide, Fermentation Alcohol, Grain Alcohol, 1-Hydroxyethane, Methyl Carbinol, Ethyl Alcohol Anhydrous, Absolute Ethanol, Alcohol, Anhydrous, Denatured Ethanol, Ethanol

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1170
CAS number	64-17-5
Formula	C ₂ H ₆ O

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	790 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	1.51 [cSt] at a temperature of 20°C 1.36 [cSt] at a temperature of 25°C
Molar mass (g/mol)	46.07
Density of gas (kg/m ³)	2.064
Solubility (g/L)	790000 [g/L] at a temperature of 20°C and salinity of 0‰ 790000 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	78.5
Melting Point (°C)	-81
Critical molar volume (m ³ /mol)	0.000168
Critical temperature (°C)	514
Critical pressure (Pa)	6137000
Surface tension (mN/m)	22.4 [mN/m] at a temperature of 20°C 21.97 [mN/m] at a temperature of 25°C
Vapour Pressure (Pa)	5875 [Pa] at a temperature of 20°C 7906 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	425
Flash Point (°C)	19
Flash Point (Pensky-Martens closed cup) (°C)	13

Lower explosivity limit (LEL) (volume %)	3.3
Upper explosivity limit (UEL) (volume %)	19
Vapor enthalpy (J/Kg)	794009 [J/Kg] at a temperature of 78.3°C 918602 [J/Kg] at a temperature of 25°C
Combustion enthalpy (J/Kg)	26800000
Specific heat capacity (J/(Kg·K))	2437.6
Combustion efficiency (%)	99
Mass flow rate of the combustion surface (Kg/(m ² ·s))	0.03
Rad fraction (%)	40
Henry's constant (mol/(m ³ ·Pa))	0.5

Behaviour at sea

Log kow	-0.32
Log koc	1.27
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Biodegradation in marine environment (Half-life) (days)	10
Bioconcentration factor (BCF)	3.16

Additional data

Colour	colourless				
Odour	alcohol odour				
MARPOL pollution category	<table border="1"> <thead> <tr> <th>Category</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Z</td> <td>Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment.</td> </tr> </tbody> </table>	Category	Description	Z	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment.
Category	Description				
Z	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment.				

Transportation data

Package group	II/III
Cargo group	20
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	alcohols, glycols
IMO class	3.2/3.3

Reactivity data

Abilities	Miscible in water.
Acid(s)	Yes

Base(s)	Yes
Static electricity	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - $e < 1$, or $> ca.7$, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold



IDHL	3300
Hazard statements	Physical
	H225 Highly flammable liquid and vapour.
	Health
	H319 Causes serious eye irritation.

Precautionary statements	Prevention
	P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
	P233 Keep container tightly closed.
	P240 Ground/bond container and receiving equipment.
	P241 Use explosion-proof electrical/ventilating/lighting/.../equipment.
	P242 Use only non-sparking tools.
	P243 Take precautionary measures against static discharge.
	P264 Wash ... thoroughly after handling.
	P280 Wear protective gloves/protective clothing/eye protection/face protection.
	Response
	P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
	P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P337 + P313 If eye irritation persists: Get medical advice/attention.
	P370 + P378 In case of fire: Use ... for extinction.
	Storage
	P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
	Disposal
	P501 Dispose of contents/container to ...

TLV-TWA	1000
TEEL-1 (mg/m3)	3000 ppm
TEEL-2 (mg/m3)	3300 ppm
TEEL-3 (mg/m3)	3300 ppm

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	1000
Lowest median lethal concentration (LC50) on crustacean (mg/l)	695
Lowest median lethal concentration (LC50) on fishes (mg/l)	11200
Highest no observed effect concentration (NOEC) on algae (mg/l)	280
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	9.6
Assessment factor (AF)	500 on the short term 500 on the long term
Predicted No Effect Concentration (PNEC) (µg/l)	1390 [µg/l] on the short term 19.2 [µg/l] on the long term

ETHANOLAMINE pure or solutions

UN Number: 2491 - CAS Number: 141-43-5

Also known as: 2-AMINOETHANOL, beta-AMINO ETHYL ALCOHOL, COLAMINE, 2-Aminoethol, β -Aminoethyl Alcohol, Ethylamine, β -Hydroxyethylamine, Monoethanolamine, Mea, Ethanolamine, Beta-Aminoethyl Alcohol, Beta-Hydroxyethylamine

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2491
CAS number	141-43-5
Formula	C ₂ H ₇ NO

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	1016 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	18.61 [cSt] at a temperature of 25°C
Molar mass (g/mol)	61.08
Density of gas (kg/m ³)	2.709
Solubility (g/L)	100000 [g/L] at a temperature of 20°C and salinity of 0‰ 100000 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	170
Melting Point (°C)	10
Critical temperature (°C)	671
Critical pressure (Pa)	8000000
Surface tension (mN/m)	48.32 [mN/m] at a temperature of 25°C
Vapour Pressure (Pa)	64 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	410
Flash Point (°C)	85
Flash Point (Pensky-Martens closed cup) (°C)	86
Lower explosivity limit (LEL) (volume %)	5.5
Upper explosivity limit (UEL) (volume %)	17
Vapor enthalpy (J/Kg)	815775 [J/Kg] at a temperature of 171°C
Combustion enthalpy (J/Kg)	24900000

Specific heat capacity (J/(Kg·K))	3201
Henry's constant (mol/(m ³ ·Pa))	0.003

Behaviour at sea

Log kow	-1.31
Log koc	0.07
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Bioconcentration factor (BCF)	3.2

Additional data

Colour	colourless
Odour	weak ammonia odour

MARPOL pollution category	Category	Description
	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.

Transportation data

Package group	III
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	alkanolamines

Reactivity data

Water	No
Abilities	Miscible in water.
Acid(s)	Yes
Base(s)	No
Metal(s) and alloys	No
Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
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Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



IDHL	1000	
Hazard statements	Health	
	H302	Harmful if swallowed.
	H312	Harmful in contact with skin.
	H314	Causes severe skin burns and eye damage.
	H332	Harmful if inhaled.
	H335	May cause respiratory irritation.
	Environmental	
	H412	Harmful to aquatic life with long lasting effects.
	Precautionary statements	Prevention
		P273
Disposal		
	P501	Dispose of contents/container to ...
TEEL-1 (mg/m3)	6 ppm	
TEEL-2 (mg/m3)	30 ppm	
TEEL-3 (mg/m3)	30 ppm	

Ecotoxicity

Lowest median lethal concentration (LC50) on crustacean (mg/l)	140
Lowest median lethal concentration (LC50) on fishes (mg/l)	150
Highest no observed effect concentration (NOEC) on algae (mg/l)	1
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	0.85
Highest no observed effect concentration (NOEC) on fishes (mg/l)	1.24

Assessment factor (AF)	100 on the short term
Predicted No Effect Concentration (PNEC) ($\mu\text{g/l}$)	9 [$\mu\text{g/l}$] on the short term

ETHOPROPHOS

UN Number: 3018

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 3018

Physical chemical data

Physical State (20°C)	Liquid
Molar mass (g/mol)	254.31
Boiling Point (°C)	90
Melting Point (°C)	-13
Vapour Pressure (Pa)	0.046 [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Colour pale yellow

Transportation data

Package group	I/II/III
IMO class	6.1

Reactivity data

Water No

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m3)	0.75
TEEL-3 (mg/m3)	15

Ecotoxicity

ETHYL ACETATE

UN Number: 1173 - CAS Number: 141-78-6

Also known as: ACETATE D'ETHYLE, ACETIC ESTER, ACETIC ETHER, ACETIDIN, ACETOXYETHANE, AETHYL ACETAT, Acetic Acid, Ethyl Ester, Ethyl Acetic Ester, Ethyl Ethanoate, Ethyl Acetate, Acetate D'Ethyle

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1173
CAS number	141-78-6
Formula	C ₄ H ₈ O

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	902 [Kg/m ³] at a temperature of 20°C 918.1 [Kg/m ³] at a temperature of 5°C 911.9 [Kg/m ³] at a temperature of 10°C 902 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	0.49 [cSt] at a temperature of 25°C 1.7754 [cSt] at a temperature of 5°C 1.7875 [cSt] at a temperature of 10°C 1.7627 [cSt] at a temperature of 20°C
Molar mass (g/mol)	88.11
Density of gas (kg/m ³)	3.87
Solubility (g/L)	86000 [g/L] at a temperature of 20°C and salinity of 0‰ 54390 [g/L] at a temperature of 20°C and salinity of 0‰ 38860 [g/L] at a temperature of 20°C and salinity of 5‰ 36810 [g/L] at a temperature of 20°C and salinity of 30‰
Boiling Point (°C)	77
Melting Point (°C)	-83
Critical molar volume (m ³ /mol)	0.000286
Critical temperature (°C)	523.3
Critical pressure (Pa)	3870000

Surface tension (mN/m)	24 [mN/m] at a temperature of 20°C
	23.39 [mN/m] at a temperature of 25°C
	25.08 [mN/m] at a temperature of 5.6°C
	24.39 [mN/m] at a temperature of 10.4°C
	23.82 [mN/m] at a temperature of 18.6°C
Interfacial tension (mN/m)	6.79 [mN/m] at a temperature of 20°C and salinity of 0‰
Vapour Pressure (Pa)	9826 [Pa] at a temperature of 20°C
	12600 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	460
Flash Point (°C)	-4
Flash Point (Pensky-Martens closed cup) (°C)	-4.4
Flash Point (Cleveland open cup) (°C)	12.8
Lower explosivity limit (LEL) (volume %)	2.2
Upper explosivity limit (UEL) (volume %)	11.5
Vapor enthalpy (J/Kg)	362500 [J/Kg] at a temperature of 77°C
	404040 [J/Kg] at a temperature of 25°C
Combust enthalpy (J/Kg)	23400000
Specific heat capacity (J/(Kg·K))	1937.4
Combustion efficiency (%)	98
Mass flow rate of the combustion surface (Kg/(m²·s))	0.06
Rad fraction (%)	23
Henry's constant (mol/(m³·Pa))	11.9

Behaviour at sea

Log kow	0.73
Log koc	0.78
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Biodegradation in marine environment (Half-life) (days)	50
Bioconcentration factor (BCF)	3.2

Additional data

Colour	colorless				
Odour	pleasant, fruit odour				
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Category	Description				
Z	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment.				

Transportation data

Package group	II
Cargo group	34
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	esters
IMO class	3.2

Reactivity data

Acid(s)	Yes
Static electricity	Yes
Oxidizing agents	Yes
Notable risks	Reacts with oxidizers.

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - $e < 1$, or $> ca. 7$, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	2 - ≥ 10 and < 100
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	0 - Not irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	DE - Dissolver/Evaporator
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold



IDHL	10000
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Hazard statements	Physical	
	H225	Highly flammable liquid and vapour.
	Health	
	H319	Causes serious eye irritation.
	H336	May cause drowsiness or dizziness.

Precautionary statements	Prevention		
	P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.	
	P233	Keep container tightly closed.	
	P240	Ground/bond container and receiving equipment.	
	P241	Use explosion-proof electrical/ventilating/lighting/.../equipment.	
	P242	Use only non-sparking tools.	
	P243	Take precautionary measures against static discharge.	
	P261	Avoid breathing dust/fume/gas/mist/vapours/spray.	
	P264	Wash ... thoroughly after handling.	
	P271	Use only outdoors or in a well-ventilated area.	
	P280	Wear protective gloves/protective clothing/eye protection/face protection.	
		Response	
	P303 + P361 + P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.	
	P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.	
	P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.	
P312	Call a POISON CENTER or doctor/physician if you feel unwell.		
P337 + P313	If eye irritation persists: Get medical advice/attention.		
P370 + P378	In case of fire: Use ... for extinction.		
	Storage		
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.		
P405	Store locked up.		

TLV-TWA	400
TEEL-1 (mg/m3)	400 ppm
TEEL-2 (mg/m3)	400 ppm
TEEL-3 (mg/m3)	2000 ppm

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	5600
Lowest median lethal concentration (LC50) on crustacean (mg/l)	130

Lowest median lethal concentration (LC50) on fishes (mg/l)	455
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	2.4
Assessment factor (AF)	1000 on the short term 1000 on the long term
Predicted No Effect Concentration (PNEC) (µg/l)	130 [µg/l] on the short term 2.4 [µg/l] on the long term

ETHYL ACETOACETATE

CAS Number: 141-97-9

Also known as: ACETOACETATE D'ETHYLE, ACETOACETIC ESTER, DIACETIC ESTER

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 141-97-9

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1028 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	130.1
Density of gas (kg/m ³)	5.779
Boiling Point (°C)	184
Melting Point (°C)	-44
Vapour Pressure (Pa)	0.1 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	295
Flash Point (°C)	65
Lower explosivity limit (LEL) (volume %)	1.4
Upper explosivity limit (UEL) (volume %)	9.5

Behaviour at sea

Additional data

Colour	colourless
Odour	pleasant, fruit odour

Transportation data

State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient

Reactivity data

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	1 - Is a floater; and/or is slightly acutely toxic; and/or is mildly irritant to skin and/or eyes

Human toxicity threshold

TEEL-1 (mg/m3)	50
TEEL-2 (mg/m3)	350
TEEL-3 (mg/m3)	500

Ecotoxicity

ETHYL ACRYLATE inhibited

UN Number: 1917 - CAS Number: 140-88-5

Also known as: ACRYLATE D'ETHYLE, ACRYLIC ACID ETHYL ESTER, Ethoxycarbonylethylene, Ethyl Acrylic Ester, Ethyl Propenoate, Ethyl 2-Propenoate, 2-Propenoic Acid, Ethyl Ester, Ethyl Acrylate, Acrylate D'Ethyle

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1917
CAS number	140-88-5
Formula	C ₅ H ₈ O ₂

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	923 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	0.75 [cSt] at a temperature of 20°C 0.6 [cSt] at a temperature of 25°C
Molar mass (g/mol)	100.12
Density of gas (kg/m ³)	3.87
Solubility (g/L)	17500 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	99
Melting Point (°C)	-75
Vapour Pressure (Pa)	11447 [Pa] at a temperature of 20°C 5150 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	350
Flash Point (Pensky-Martens closed cup) (°C)	8
Flash Point (Cleveland open cup) (°C)	6.7
Lower explosivity limit (LEL) (volume %)	1.8
Upper explosivity limit (UEL) (volume %)	9.5
Vapor enthalpy (J/Kg)	646549 [J/Kg] at a temperature of 99.5°C
Combust enthalpy (J/Kg)	25700000
Combustion efficiency (%)	96
Mass flow rate of the combustion surface (Kg/(m ² -s))	0.09
Rad fraction (%)	23

Henry's constant (mol/(m ³ ·Pa))	39.82
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Behaviour at sea

Log kow	1.25
Log koc	1.62
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Biodegradation in marine environment (Half-life) (days)	Not biodegradable
Bioconcentration factor (BCF)	2.1

Additional data

Colour	colourless				
Odour	fruit odour				
MARPOL pollution category	<table border="1"> <thead> <tr> <th>Category</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Y</td> <td>Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.</td> </tr> </tbody> </table>	Category	Description	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.
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Standard behavior classification	ED				

Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	14
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	under pressure
Family name	acrylates
IMO class	3.2

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	No
Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	No

Notable risks	Polymerization.
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GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	1 - Low
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	ED - Evaporator/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



IDHL	2000	
Hazard statements	Physical	
	H225	Highly flammable liquid and vapour.
	Health	
	H302	Harmful if swallowed.
	H312	Harmful in contact with skin.
	H315	Causes skin irritation.
	H317	May cause an allergic skin reaction.
	H319	Causes serious eye irritation.
	H331	Toxic if inhaled.
	H335	May cause respiratory irritation.
	Environmental	
	H412	Harmful to aquatic life with long lasting effects.

Precautionary statements	Prevention	
	P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
	P240	Ground/bond container and receiving equipment.
	P260	Do not breathe dust/fume/gas/mist/vapours/spray.
	P280	Wear protective gloves/protective clothing/eye protection/face protection.
	Response	
	P303 + P361 + P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
	P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	Storage	
	P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
	Disposal	
	P501	Dispose of contents/container to ...

ERPG-1 (ppm)	0.01
ERPG-2 (ppm)	30
ERPG-3 (ppm)	300

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	5.5
Lowest median lethal concentration (LC50) on crustacean (mg/l)	7.9
Lowest median lethal concentration (LC50) on fishes (mg/l)	4.6
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	0.19
Highest no observed effect concentration (NOEC) on fishes (mg/l)	0.78
Assessment factor (AF)	100 on the short term 1000 on the long term
Predicted No Effect Concentration (PNEC) (µg/l)	46 [µg/l] on the short term 0.19 [µg/l] on the long term

ETHYL ALUMINIUM CHLORIDE

UN Number: 3052

Also known as: CHLORURE DE DIETHYL-ALUMINIUM

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number 3052

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1200 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	129.6
Boiling Point (°C)	194
Melting Point (°C)	-32
Vapour Pressure (Pa)	650 [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Standard behavior classification D, SD, S

Transportation data

State	liquid
IMO class	4.2

Reactivity data

Water	Yes
Acid(s)	Yes

GESAMP Hazard profile

Human toxicity threshold

Ecotoxicity

ETHYL AMYL KETONE

UN Number: 2271 - CAS Number: 106-68-3

Also known as: AMYL ETHYL KETONE, EAK

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number	2271
CAS number	106-68-3

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	822 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	128.22
Density of gas (kg/m ³)	5.68
Boiling Point (°C)	160
Melting Point (°C)	-56.7
Vapour Pressure (Pa)	270 [Pa] at a temperature of 20°C
Flash Point (°C)	46

Behaviour at sea

Additional data

Colour	colourless
Odour	mild fruity
Standard behavior classification	FD

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	18
Temperature (°C)	ambient
Family name	ketones
IMO class	3.3

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	2 - ≥ 2 and < 3
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	2 - Irritating
Interference with coastal amenities (E2)	FD - Floater/Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

TLV-TWA	25
TEEL-1 (mg/m3)	25 ppm
TEEL-2 (mg/m3)	25 ppm
TEEL-3 (mg/m3)	100 ppm

Ecotoxicity

ETHYL BUTYRATE

UN Number: 1180 - CAS Number: 105-54-4

Also known as: BUTYRATE D'ETHYLE, BUTYRIC ACID ETHYL ESTER, BUTYRIC ETHER

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number	1180
CAS number	105-54-4

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	879 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	116.16
Density of gas (kg/m ³)	5.16
Boiling Point (°C)	121
Melting Point (°C)	-93
Vapour Pressure (Pa)	1868 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	463
Flash Point (°C)	24

Behaviour at sea

Additional data

Colour	colourless
Odour	fruity
Standard behavior classification	FED

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	34
State	liquid
Temperature (°C)	ambient

Family name	esters
IMO class	3.3

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes
Combustibles	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	2 - Irritating
Interference with coastal amenities (E2)	FED - Floater/Evaporator/Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

ETHYL CHLORIDE

UN Number: 1037

Also known as: CHLOROETHANE, CHLORURE D'ETHYLE

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number 1037

Physical chemical data

Physical State (20°C)	Gas
Density (kg/m ³)	2.838 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	64.52
Density of gas (kg/m ³)	2.838
Boiling Point (°C)	12.4
Melting Point (°C)	-142
Vapour Pressure (Pa)	131690 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	510
Flash Point (°C)	-50
Lower explosivity limit (LEL) (volume %)	3.6
Upper explosivity limit (UEL) (volume %)	14.8

Behaviour at sea

Additional data

Colour	colourless
Odour	pleasant odour

Transportation data

Transport mode	Gas, Packaged
Ship type	2G, 2PG
Cargo group	36
State	liq.compr.gas
Temperature (°C)	ambient

Pressure (Pa)	under pressure
Family name	halogenated hydrocarb
IMO class	2(2.1)

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

IDHL	20000
TLV-TWA	1000
TEEL-1 (mg/m3)	1500 ppm
TEEL-2 (mg/m3)	3800 ppm
TEEL-3 (mg/m3)	3800 ppm

Ecotoxicity

ETHYL CYCLOHEXANE

CAS Number: 1678-91-7

Also known as: CYCLOHEXYLETHANE

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

CAS number 1678-91-7

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	788 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	112.22
Density of gas (kg/m ³)	4.99
Boiling Point (°C)	132
Melting Point (°C)	-111.3
Vapour Pressure (Pa)	< 1427 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	238
Flash Point (°C)	18
Lower explosivity limit (LEL) (volume %)	0.9
Upper explosivity limit (UEL) (volume %)	6.6

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless
Standard behavior classification	FE/FED

Transportation data

Cargo group	31
State	liquid
Family name	paraffins

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	4 - ≥ 4 and < 5
Bioaccumulation in BCF (A1B)	4 - ≥ 500 and < 4000
Bioaccumulation (A1)	4 - High potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	FE - Floater/Evaporator
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

ETHYL HEXALDEHYDE

UN Number: 1191

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1191

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	857 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	128.22
Boiling Point (°C)	164
Melting Point (°C)	< -76
Ignition Temperature (°C)	197
Flash Point (°C)	53

Behaviour at sea

Additional data

Colour	colourless
Odour	mild odour

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	19
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	aldehydes
IMO class	3.3

Reactivity data

Water	No
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Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	No
Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

Ecotoxicity

ETHYL LACTATE

UN Number: 1192

Also known as: ACTYOL (T), ACYTOL (T)

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number 1192

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1030 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	118.1
Boiling Point (°C)	154
Flash Point (°C)	42
Lower explosivity limit (LEL) (volume %)	1.5
Upper explosivity limit (UEL) (volume %)	11.4

Behaviour at sea

Additional data

Colour	colourless
Odour	mild odour

Transportation data

Package group	III
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
IMO class	3.3

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

Ecotoxicity

ETHYL METHACRYLATE inhibited

UN Number: 2277 - CAS Number: 97-63-2

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number	2277
CAS number	97-63-2

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	915 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	114
Density of gas (kg/m ³)	5.083
Boiling Point (°C)	117
Melting Point (°C)	-75
Vapour Pressure (Pa)	1995 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	450
Flash Point (°C)	20
Lower explosivity limit (LEL) (volume %)	1.8

Behaviour at sea

Persistence (days)	1.6
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Additional data

Colour	colourless
Odour	sharp, unpleasant odour
Standard behavior classification	FE

Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	14
State	liquid
Temperature (°C)	< 38

Pressure (Pa)	ambient
Family name	acrylates
IMO class	3.2

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	No
Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	FE - Floater/Evaporator
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

TEEL-1 (mg/m3)	150 ppm
TEEL-2 (mg/m3)	750 ppm
TEEL-3 (mg/m3)	750 ppm

Ecotoxicity

ETHYL PROPIONATE

UN Number: 1195 - CAS Number: 105-37-3

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1195
CAS number	105-37-3

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	890 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	102.1
Density of gas (kg/m ³)	4.515
Boiling Point (°C)	99
Melting Point (°C)	-74
Vapour Pressure (Pa)	< 5300 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	440
Flash Point (°C)	12
Lower explosivity limit (LEL) (volume %)	1.9
Upper explosivity limit (UEL) (volume %)	11

Behaviour at sea

Additional data

Colour	colourless
Odour	pineapple-like

Transportation data

Package group	II
Cargo group	34
State	liquid
Temperature (°C)	ambient
Family name	esters
IMO class	3.2

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	ED - Evaporator/Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

TEEL-1 (mg/m3)	25 ppm
TEEL-2 (mg/m3)	150 ppm
TEEL-3 (mg/m3)	750 ppm

Ecotoxicity

ETHYL TOLUENE

CAS Number: 95-63-6

Also known as: Pseudocumene, Trimethyl-1,2,4 Benzene, Trimethylbenzene, 1,2,4-Trimethylbenzene, 1,2,4-Trimethyl Benzene

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number	95-63-6
Formula	C ₉ H ₁₂

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m³)	881 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	0.843 [cSt] at a temperature of 20°C
Molar mass (g/mol)	120.19
Density of gas (kg/m³)	5.35
Solubility (g/L)	60 [g/L] at a temperature of 20°C and salinity of 0‰ 42 [g/L] at a temperature of 25°C and salinity of 0‰ 40 [g/L] at a temperature of 25°C and salinity of 34.5‰
Boiling Point (°C)	165.2
Melting Point (°C)	-80.8
Critical temperature (°C)	649.1
Critical pressure (Pa)	3232000
Surface tension (mN/m)	29.2 [mN/m] at a temperature of 25°C
Ignition Temperature (°C)	440
Flash Point (°C)	39
Flash Point (Pensky-Martens closed cup) (°C)	44
Lower explosivity limit (LEL) (volume %)	0.9
Upper explosivity limit (UEL) (volume %)	6.4
Vapor enthalpy (J/Kg)	398785 [J/Kg] at a temperature of 25°C
Combust enthalpy (J/Kg)	41000000
Specific heat capacity (J/(Kg·K))	1789
Combustion efficiency (%)	70

Mass flow rate of the combustion surface (Kg/(m ² ·s))	0.06
Rad fraction (%)	30
Henry's constant (mol/(m ³ ·Pa))	624.162

Behaviour at sea

Log kow	3.78
Log koc	3.33
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Biodegradation in marine environment (Half-life) (days)	10
Bioconcentration factor (BCF)	152

Additional data

Colour	colourless
Odour	pleasant

MARPOL pollution category	Category	Description
	X	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a major hazard to either marine resources or human health and, therefore, justify the prohibition of the discharge into the marine environment.

Transportation data

Cargo group	32
State	liquid
Temperature (°C)	ambient
Family name	aromatic hydrocarbons

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	3 - ≥3 and <4
Bioaccumulation (A1)	3 - Moderate potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating

Interference with coastal amenities (E2)	F - Floating substance, not likely to evaporate or to dissolve quickly
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold



Hazard statements	Physical		
	H226	Flammable liquid and vapour.	
	Health		
	H315	Causes skin irritation.	
	H319	Causes serious eye irritation.	
	H332	Harmful if inhaled.	
	H335	May cause respiratory irritation.	
	Environmental		
	H411	Toxic to aquatic life with long lasting effects.	
	Precautionary statements	Prevention	
P210		Keep away from heat/sparks/open flames/hot surfaces. No smoking.	
P243		Take precautionary measures against static discharge.	
P261		Avoid breathing dust/fume/gas/mist/vapours/spray.	
P280		Wear protective gloves/protective clothing/eye protection/face protection.	
Response			
P301 + P310		IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.	
P302 + P352		IF ON SKIN: Wash with plenty of soap and water.	
TEEL-1 (mg/m3)		500	
TEEL-2 (mg/m3)		500	
TEEL-3 (mg/m3)	500		

Ecotoxicity

Lowest median lethal concentration (LC50) on crustacean (mg/l)	4.35
Lowest median lethal concentration (LC50) on fishes (mg/l)	7.72
Assessment factor (AF)	1 on the short term
Predicted No Effect Concentration (PNEC) (µg/l)	120 [µg/l] on the short term

ETHYL-3-ETHOXYPROPIONATE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	950 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	146.21
Density of gas (kg/m ³)	6.45
Boiling Point (°C)	170
Melting Point (°C)	-100
Vapour Pressure (Pa)	90 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	377
Flash Point (°C)	58
Lower explosivity limit (LEL) (volume %)	1.05

Behaviour at sea

Additional data

Colour	water-white
Odour	esteric
Standard behavior classification	FD

Transportation data

Cargo group	34
State	liquid
Temperature (°C)	ambient
Family name	esters

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Biodegradation (A2)

NR - Not readily biodegradable

Human toxicity threshold

Ecotoxicity

ETHYLAMINE

UN Number: 1036 - CAS Number: 75-04-7

Also known as: AMINOETHANE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1036
CAS number	75-04-7

Physical chemical data

Physical State (20°C)	Gas
Density (kg/m ³)	2.064 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	45.1
Density of gas (kg/m ³)	2.064
Boiling Point (°C)	16.7
Melting Point (°C)	-81
Vapour Pressure (Pa)	120000 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	335
Flash Point (°C)	-49
Lower explosivity limit (LEL) (volume %)	3.5
Upper explosivity limit (UEL) (volume %)	14

Behaviour at sea

Additional data

Colour	colourless
Odour	strong ammonia odour
Standard behavior classification	GD

Transportation data

Transport mode	Bulk,Gas,Packaged
State	liq.compr.gas
Temperature (°C)	ambient

Pressure (Pa)	under pressure
Family name	aliphatic amines
IMO class	2(2.1)

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	No
Metal(s) and alloys	No
Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	3 - Corrosive
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	GD - Gas/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

IDHL	4000
TLV-TWA	10
TEEL-1 (mg/m3)	7.5 ppm
TEEL-2 (mg/m3)	49 ppm
TEEL-3 (mg/m3)	270 ppm

Ecotoxicity

ETHYLAMINE solutions (less than 72%)

UN Number: 2270

Also known as: AMINOETHANE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 2270

Physical chemical data

Physical State (20°C)	Gas
Density (kg/m ³)	687 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	45.1
Density of gas (kg/m ³)	1.935
Boiling Point (°C)	16.5
Melting Point (°C)	-81
Vapour Pressure (Pa)	154000 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	384
Flash Point (°C)	-18
Lower explosivity limit (LEL) (volume %)	3.5
Upper explosivity limit (UEL) (volume %)	14

Behaviour at sea

Additional data

Colour	colourless
Odour	strong ammonia-like
Standard behavior classification	DE

Transportation data

Transport mode	Bulk, Packaged (sol.)
Ship type	2 (sol.)
Package group	II (sol.)
Cargo group	7 (sol.)

State	liquid
Temperature (°C)	ambient
Family name	aliphatic amines
IMO class	3.2

Reactivity data

Water	No
Acid(s)	Yes
Metal(s) and alloys	Yes
Oxidizing agents	Yes
Combustibles	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	DE - Dissolver/Evaporator
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

IDHL	600
TEEL-1 (mg/m3)	7.5 ppm
TEEL-2 (mg/m3)	49 ppm
TEEL-3 (mg/m3)	270 ppm

Ecotoxicity

ETHYLBENZENE

UN Number: 1175 - CAS Number: 100-41-4

Also known as: Ethyl Benzene, Ethylbenzol, Eb, Phenylethane, Ethylbenzene

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1175
CAS number	100-41-4
Formula	C ₈ H ₁₀

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	867 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	0.77 [cSt] at a temperature of 20°C 0.73151 [cSt] at a temperature of 25°C
Molar mass (g/mol)	106.17
Density of gas (kg/m ³)	3.773
Solubility (g/L)	152 [g/L] at a temperature of 20°C and salinity of 0% 160 [g/L] at a temperature of 25°C and salinity of 0%
Boiling Point (°C)	136.4
Melting Point (°C)	-95
Critical molar volume (m ³ /mol)	0.000374
Critical temperature (°C)	617.5
Critical pressure (Pa)	3609000
Surface tension (mN/m)	29.2 [mN/m] at a temperature of 20°C 28.75 [mN/m] at a temperature of 25°C
Interfacial tension (mN/m)	35.48 [mN/m] at a temperature of 20°C and salinity of 0%
Vapour Pressure (Pa)	930 [Pa] at a temperature of 20°C 1270 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	430
Flash Point (°C)	15
Flash Point (Pensky-Martens closed cup) (°C)	21
Flash Point (Cleveland open cup) (°C)	26.7

Lower explosivity limit (LEL) (volume %)	0.8
Upper explosivity limit (UEL) (volume %)	6.7
Vapor enthalpy (J/Kg)	335029 [J/Kg] at a temperature of 136.2°C 397853 [J/Kg] at a temperature of 25°C
Combust enthalpy (J/Kg)	40900000
Specific heat capacity (J/(Kg·K))	1725.5
Combustion efficiency (%)	70
Mass flow rate of the combustion surface (Kg/(m ² ·s))	0.07
Rad fraction (%)	60
Henry's constant (mol/(m ³ ·Pa))	798

Behaviour at sea

Persistence (days)	0.8
Log kow	3.13
Log koc	2.38
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Biodegradation in marine environment (Half-life) (days)	50
Bioconcentration factor (BCF)	91

Additional data

Colour	colourless				
Odour	sweet, gasoline odour				
MARPOL pollution category	<table border="1"> <thead> <tr> <th>Category</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Y</td> <td>Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.</td> </tr> </tbody> </table>	Category	Description	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.
Category	Description				
Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.				
Standard behavior classification	FE				

Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	32
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	aromatic hydrocarbons
IMO class	3.2

Reactivity data

Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	3 - ≥ 3 and < 4
Bioaccumulation in BCF (A1B)	2 - ≥ 10 and < 100
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	1 - Low
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Specific Health Concern (D3)	T - Specific Target Organ Toxicity following single or repeated exposure
Interference with coastal amenities (E2)	FE - Floater/Evaporator
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



IDHL	2000	
Hazard statements	Physical	
	H225	Highly flammable liquid and vapour.
	Health	
	H304	May be fatal if swallowed and enters airways.
	H332	Harmful if inhaled.
	H373	May cause damage to organs through prolonged or repeated exposure, exposure cause the hazard:
	Environmental	
H412	Harmful to aquatic life with long lasting effects.	

Precautionary statements	Prevention
	P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
	P240 Ground/bond container and receiving equipment.
	P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
	P273 Avoid release to the environment.
	P280 Wear protective gloves/protective clothing/eye protection/face protection.
	Response
	P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
	P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
	P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P331 Do NOT induce vomiting.
	Disposal
	P501 Dispose of contents/container to ...
TLV-TWA	100

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	3.6
Lowest median lethal concentration (LC50) on crustacean (mg/l)	1.8
Lowest median lethal concentration (LC50) on fishes (mg/l)	4.2
Highest no observed effect concentration (NOEC) on algae (mg/l)	1
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	1
Assessment factor (AF)	100 on the short term 100 on the long term
Predicted No Effect Concentration (PNEC) (µg/l)	18 [µg/l] on the short term 10 [µg/l] on the long term

ETHYLENE (compressed gas)

UN Number: 1962

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1962

Physical chemical data

Physical State (20°C)	Gas
Density (kg/m ³)	1.125 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	28.05
Density of gas (kg/m ³)	1.125
Boiling Point (°C)	-103.5
Melting Point (°C)	-169
Vapour Pressure (Pa)	415330041 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	425
Flash Point (°C)	-16
Lower explosivity limit (LEL) (volume %)	2.7
Upper explosivity limit (UEL) (volume %)	34

Behaviour at sea

Additional data

Colour	colourless
Odour	sweet odour

Transportation data

Transport mode	Gas, Packaged
Cargo group	30
State	liq.compr.gas
Temperature (°C)	-104
Pressure (Pa)	under pressure
Family name	olefins
IMO class	2(2.1)

Reactivity data

Acid(s)	Yes
Static electricity	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m3)	600 ppm
TEEL-2 (mg/m3)	7500 ppm
TEEL-3 (mg/m3)	7500 ppm

Ecotoxicity

ETHYLENE (refrigerated liquid)

UN Number: 1038

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1038

Physical chemical data

Physical State (20°C)	Gas
Density (kg/m ³)	1.125 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	28.05
Density of gas (kg/m ³)	1.125
Boiling Point (°C)	-103.5
Melting Point (°C)	-169
Vapour Pressure (Pa)	415330041 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	425
Flash Point (°C)	-16
Lower explosivity limit (LEL) (volume %)	2.7
Upper explosivity limit (UEL) (volume %)	34

Behaviour at sea

Additional data

Colour	colourless
Odour	sweet odour

Transportation data

Transport mode	Gas, Packaged
Ship type	2G
Cargo group	30
State	liquefied gas
Temperature (°C)	-104
Pressure (Pa)	under pressure
Family name	olefins

IMO class	2(2.1)
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Reactivity data

Acid(s)	Yes
Static electricity	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m3)	600 ppm
TEEL-2 (mg/m3)	7500 ppm
TEEL-3 (mg/m3)	7500 ppm

Ecotoxicity

ETHYLENE CARBONATE

CAS Number: 96-49-1

Also known as: CARBONATE D'ETHYLENE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 96-49-1

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	1300 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	88
Density of gas (kg/m ³)	3.87
Boiling Point (°C)	244
Melting Point (°C)	36
Flash Point (°C)	143

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless

Transportation data

Reactivity data

Oxidizing agents Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable

Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	SD - Sinker/Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

ETHYLENE CHLOROHYDRIN

UN Number: 1135 - CAS Number: 107-07-3

Also known as: 2-CHLOROETHANOL, 2-CHLOROETHYL ALCOHOL, beta-CHLOROETHYL ALCOHOL, CHLOROHYDRINE ETHYLENIQUE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1135
CAS number	107-07-3

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1197 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	80.51
Density of gas (kg/m ³)	3.612
Boiling Point (°C)	128.9
Melting Point (°C)	-70
Vapour Pressure (Pa)	730 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	425
Flash Point (°C)	55
Lower explosivity limit (LEL) (volume %)	4.9
Upper explosivity limit (UEL) (volume %)	15.9

Behaviour at sea

Additional data

Colour	colourless
Odour	weak sweet, pleasant odour

Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	20

State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	alcohols, glycols
IMO class	6.1

Reactivity data

Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - $e < 1$, or $> ca. 7$, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	3 - Moderately high
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	4 - High
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

IDHL	10
TEEL-1 (mg/m3)	0.54 ppm
TEEL-2 (mg/m3)	0.66 ppm
TEEL-3 (mg/m3)	0.5 ppm

Ecotoxicity

ETHYLENE CYANOHYDRIN

CAS Number: 109-78-4

Also known as: 2-CYANOETHANOL, 2-CYANOETHYL ALCOHOL, CYANOHYDRINE ETHYLENIQUE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 109-78-4

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1047 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	71.08
Density of gas (kg/m ³)	3.225
Boiling Point (°C)	229.9
Melting Point (°C)	-46
Vapour Pressure (Pa)	10 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	494
Flash Point (°C)	21
Lower explosivity limit (LEL) (volume %)	2.3
Upper explosivity limit (UEL) (volume %)	12.1

Behaviour at sea

Additional data

Colour	colourless, yellow-brown
Odour	weak odour to odourless

Transportation data

Cargo group	20
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	alcohols, glycols

Reactivity data

Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

ETHYLENE DIAMINE TETRA-ACETIC ACID

CAS Number: #Error

Also known as: ACIDE ETHYLENE DIAMINE TETRA-ACETIQUE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number #Error

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	860 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	292.2
Melting Point (°C)	240

Behaviour at sea

Additional data

Colour	white
Odour	odourless

Transportation data

State	solid
Temperature (°C)	ambient

Reactivity data

Water	No
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GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible

Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

ETHYLENE DIBROMIDE

UN Number: 1605 - CAS Number: 106-93-4

Also known as: BOWFUME (T), BROMOFUME (T), DBE, sym-DIBROMETHANE, 1,2-DIBROMOETHANE, DIBROMURE D'ETHYLENE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1605
CAS number	106-93-4

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	2180 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	187.86
Density of gas (kg/m ³)	8.359
Boiling Point (°C)	131
Melting Point (°C)	10
Vapour Pressure (Pa)	1133 [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Colour	colourless
Odour	sweet odour
Standard behavior classification	SD

Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	36
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	under pressure

Family name	halogenated hydrocarb
IMO class	6.1

Reactivity data

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation in BCF (A1B)	2 - ≥ 10 and < 100
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	3 - Corrosive
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	SD - Sinker/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

IDHL	400
TLV-TWA	20
TEEL-1 (mg/m3)	17 ppm
TEEL-2 (mg/m3)	24 ppm
TEEL-3 (mg/m3)	46 ppm

Ecotoxicity

ETHYLENE GLYCOL

CAS Number: 107-21-1

Also known as: 1,2-DIHYDROXY ETHANE, DIHYDROXYETHANE, DOWTHERM SRI (T), 1,2-Dihydroxyethane, 1,2-Ethanediol, Ethylene Alcohol, Ethylene Dihydrate, Glycol, Glycol Alcohol, Monoethylene Glycol, 2-Hydroxyethanol, Eg, Ethylene Glycol

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number	107-21-1
Formula	C ₂ H ₆ O ₂

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	1115 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	18.9 [cSt] at a temperature of 20°C 15.05 [cSt] at a temperature of 25°C
Molar mass (g/mol)	62.07
Density of gas (kg/m ³)	2.761
Solubility (g/L)	1110000 [g/L] at a temperature of 20°C and salinity of 0‰
Boiling Point (°C)	197.8
Melting Point (°C)	-16
Critical temperature (°C)	720
Critical pressure (Pa)	8000000
Surface tension (mN/m)	48.4 [mN/m] at a temperature of 20°C 47.99 [mN/m] at a temperature of 25°C
Vapour Pressure (Pa)	2266 [Pa] at a temperature of 20°C 10 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	410
Flash Point (°C)	111
Flash Point (Pensky-Martens closed cup) (°C)	111
Flash Point (Cleveland open cup) (°C)	115
Lower explosivity limit (LEL) (volume %)	3.2
Upper explosivity limit (UEL) (volume %)	15.3

Vapor enthalpy (J/Kg)	813598 [J/Kg] at a temperature of 198°C 1029482 [J/Kg] at a temperature of 25°C
Combust enthalpy (J/Kg)	17000000
Specific heat capacity (J/(Kg·K))	2394.1
Combustion efficiency (%)	98
Mass flow rate of the combustion surface (Kg/(m ² ·s))	0.02
Rad fraction (%)	22
Henry's constant (mol/(m ³ ·Pa))	0

Behaviour at sea

Log kow	-1.93
Log koc	0.6
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Biodegradation in marine environment (Half-life) (days)	50
Bioconcentration factor (BCF)	10

Additional data

Colour	colourless				
Odour	odourless				
MARPOL pollution category	<table border="1"> <thead> <tr> <th>Category</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Y</td> <td>Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.</td> </tr> </tbody> </table>	Category	Description	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.
Category	Description				
Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.				

Transportation data

Cargo group	20
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	alcohols, glycols

Reactivity data

Abilities	Miscible in water.
Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

Notable risks	Reacts with oxidizers.
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GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	0 - Not irritating
Eye irritation/corrosivity (D2)	0 - Not irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	1 - Is a floater; and/or is slightly acutely toxic; and/or is mildly irritant to skin and/or eyes

Human toxicity threshold



Hazard statements	Health
	H302 Harmful if swallowed.
	H373 May cause damage to organs through prolonged or repeated exposure, exposure cause the hazard:
TLV-TWA	100
TEEL-1 (mg/m3)	10 ppm
TEEL-2 (mg/m3)	40 ppm
TEEL-3 (mg/m3)	60 ppm

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	10000
Lowest median lethal concentration (LC50) on crustacean (mg/l)	20000
Lowest median lethal concentration (LC50) on fishes (mg/l)	56484
Highest no observed effect concentration (NOEC) on algae (mg/l)	5740
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	3000
Assessment factor (AF)	1000 on the short term 1000 on the long term
Predicted No Effect Concentration (PNEC) (µg/l)	10000 [µg/l] on the short term 3000 [µg/l] on the long term

ETHYLENE GLYCOL ACETATE

Also known as: ACETATE D'ETHYLENEGLYCOL

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1100 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	104.1
Density of gas (kg/m ³)	4.63
Boiling Point (°C)	182
Melting Point (°C)	-42
Vapour Pressure (Pa)	400 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	460
Flash Point (°C)	102
Lower explosivity limit (LEL) (volume %)	7.8
Upper explosivity limit (UEL) (volume %)	27.7

Behaviour at sea

Additional data

Colour	colourless
Odour	weak fruity

Transportation data

Cargo group	34
State	liquid
Temperature (°C)	ambient
Family name	esters

Reactivity data

Water	Yes
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Acid(s)	Yes
Base(s)	No
Metal(s) and alloys	No
Oxidizing agents	Yes

GESAMP Hazard profile

Human toxicity threshold

Ecotoxicity

ETHYLENE GLYCOL DIACETATE

CAS Number: 111-55-7

Also known as: DIACETATE D'ETHYLENEGLYCOL

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 111-55-7

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1104 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	146.1
Boiling Point (°C)	190.9
Melting Point (°C)	-41.5
Ignition Temperature (°C)	482
Flash Point (°C)	98
Lower explosivity limit (LEL) (volume %)	1.6
Upper explosivity limit (UEL) (volume %)	8.4

Behaviour at sea

Additional data

Colour	colourless
Odour	weak fruity
Standard behavior classification	D/DE

Transportation data

State	liquid
Temperature (°C)	ambient
Family name	esters

Reactivity data

Water	No
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Oxidizing agents	Yes
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GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	1 - Is a floater; and/or is slightly acutely toxic; and/or is mildly irritant to skin and/or eyes

Human toxicity threshold

Ecotoxicity

Ethylene Glycol Methyl Butyl Ether

CAS Number: 13343-98-1

Also known as: 2,5-Dioxanonane, Butyl 2-Methoxyethyl Ether, 1-(2-Methoxyethoxy)Butane, 1-Butoxy-2-Methoxyethane, Ethylene Glycol Methyl Butyl Ether, Ether Methylbutylique De L'Ethylene Glycol

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number	13343-98-1
Formula	C ₇ H ₁₆ O ₂

Physical chemical data

Physical State (25°C)	Liquid
Molar mass (g/mol)	132.20284
Boiling Point (°C)	147
Henry's constant (mol/(m ³ ·Pa))	3.03

Behaviour at sea

Log kow	1.27
Log koc	0.442
Bioconcentration factor (BCF)	1.883

Additional data

MARPOL pollution category	Category	Description
	Other Substances	Substances which have been evaluated and found to fall outside Category X, Y or Z because they are considered to present no harm to marine resources, human health, amenities or other legitimate uses of the sea when discharged into the sea from tank cleaning of deballasting operations. The discharge of bilge or ballast water or other residues or mixtures containing these substances are not subject to any requirements of MARPOL Annex II.

Transportation data

Reactivity data

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Interference with coastal amenities (E2)	D - Dissolver

Human toxicity threshold

Ecotoxicity

ETHYLENE GLYCOL METHYL ETHER ACETATE

UN Number: 1189 - CAS Number: 110-49-6

Also known as: ACETATE DE L'ETHER METHYLIQUE DE L'ETHYLENEGLYCOL

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1189
CAS number	110-49-6

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1006 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	118.13
Density of gas (kg/m ³)	5.29
Boiling Point (°C)	145
Melting Point (°C)	-65
Vapour Pressure (Pa)	269 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	393
Flash Point (°C)	44
Lower explosivity limit (LEL) (volume %)	1.5 (93°C)
Upper explosivity limit (UEL) (volume %)	12.3 (93°C)

Behaviour at sea

Additional data

Colour	colourless
Odour	mild, ether-like

Transportation data

Transport mode	Bulk, Packaged
Package group	III

State	liquid
Temperature (°C)	ambient
Family name	esters
IMO class	3.3

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Specific Health Concern (D3)	R - Reprotoxicity
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

IDHL	200
TEEL-1 (mg/m3)	0.3 ppm
TEEL-2 (mg/m3)	20 ppm
TEEL-3 (mg/m3)	200 ppm

Ecotoxicity

ETHYLENE GLYCOL MONOBUTYL ETHER ACETATE

CAS Number: 112-07-2

Also known as: ACETATE DE L'ETHER MONOBUTYLIQUE DE L' ETHYLENE GLYCOL

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 112-07-2

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	942 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	160.21
Boiling Point (°C)	192.4
Melting Point (°C)	-63
Vapour Pressure (Pa)	400 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	340
Flash Point (°C)	71
Lower explosivity limit (LEL) (volume %)	0.9
Upper explosivity limit (UEL) (volume %)	8.5

Behaviour at sea

Persistence (days) 0.8

Additional data

Colour	colourless
Odour	weak fruit odour
Standard behavior classification	E, FE, F

Transportation data

Cargo group	34
State	liquid

Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	esters

Reactivity data

Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	FD - Floater/Dissolver
Effects on wildlife and bottom habitats (E3)	1 - Is a floater; and/or is slightly acutely toxic; and/or is mildly irritant to skin and/or eyes

Human toxicity threshold

TEEL-1 (mg/m3)	60 ppm
TEEL-2 (mg/m3)	100 ppm
TEEL-3 (mg/m3)	150 ppm

Ecotoxicity

ETHYLENE GLYCOL MONOETHYL ETHER

UN Number: 1171 - CAS Number: 110-80-5

Also known as: CELLOSOLVE, CELLOSOLVE SOLVENT, DOWANOL EE

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number	1171
CAS number	110-80-5

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	931 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	90.12
Density of gas (kg/m ³)	3.87
Boiling Point (°C)	135.1
Melting Point (°C)	-69.4
Vapour Pressure (Pa)	503 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	235
Flash Point (°C)	40
Lower explosivity limit (LEL) (volume %)	1.7
Upper explosivity limit (UEL) (volume %)	15.7

Behaviour at sea

Additional data

Colour	colourless
Odour	sweet ether-like

Transportation data

Package group	III
Cargo group	40
State	liquid
Temperature (°C)	ambient

Pressure (Pa)	ambient
Family name	glycol ethers
IMO class	3.3

Reactivity data

Water	No
Acid(s)	Yes
Metal(s) and alloys	Yes (Cu)
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

IDHL	500
TEEL-1 (mg/m3)	15 ppm
TEEL-2 (mg/m3)	500 ppm
TEEL-3 (mg/m3)	500 ppm

Ecotoxicity

ETHYLENE GLYCOL MONOETHYL ETHER ACETATE

UN Number: 1172

Also known as: ACETATE DE CELLOSOLVE, ACETATE DE L'ETHER MONOETHYLIQUE DE L'ETHYLENE GLYCOL, ACETIC ACID-2-ETHOXY ETHYL ESTER, CELLOSOLVE ACETATE, CSAC

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1172

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	974 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	132.16
Density of gas (kg/m ³)	6.06
Boiling Point (°C)	156
Melting Point (°C)	-61.7
Vapour Pressure (Pa)	159 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	382
Flash Point (°C)	49
Lower explosivity limit (LEL) (volume %)	1.2
Upper explosivity limit (UEL) (volume %)	12.7

Behaviour at sea

Additional data

Colour	colourless
Odour	mild ester-like

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	34

State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	esters
IMO class	3.3

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Human toxicity threshold

IDHL	500
TEEL-1 (mg/m3)	75 ppm
TEEL-2 (mg/m3)	500 ppm
TEEL-3 (mg/m3)	500 ppm

Ecotoxicity

ETHYLENE GLYCOL MONOMETHYL ETHER

UN Number: 1188 - CAS Number: 109-86-4

Also known as: DOWANOL EM, 2-Methoxyethanol, Methyl Cellosolve, Methyl Oxitol, Methylglycol, Ethylene Glycol Monomethyl Ether, Ether Monomethylique De L'Ethylene Glycol

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1188
CAS number	109-86-4
Formula	C ₃ H ₈ O ₂

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	966 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	76.1
Density of gas (kg/m ³)	5.289
Solubility (g/L)	1000000 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	124.7
Melting Point (°C)	-85
Critical molar volume (m ³ /mol)	0.000263
Critical temperature (°C)	597.6
Critical pressure (Pa)	5285000
Surface tension (mN/m)	30.84 [mN/m] at a temperature of 25°C
Vapour Pressure (Pa)	505 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	285
Flash Point (°C)	37
Flash Point (Pensky-Martens closed cup) (°C)	42
Lower explosivity limit (LEL) (volume %)	2.5
Upper explosivity limit (UEL) (volume %)	19.8
Vapor enthalpy (J/Kg)	493331 [J/Kg] at a temperature of 124.1°C 593600 [J/Kg] at a temperature of 25°C
Combustion enthalpy (J/Kg)	21980699
Specific heat capacity (J/(Kg·K))	2249

Henry's constant (mol/(m ³ ·Pa))	0.033
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Behaviour at sea

Log kow	-0.77
Log koc	0
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Bioconcentration factor (BCF)	3

Additional data

Colour	colourless				
Odour	odourless				
MARPOL pollution category	<table border="1"> <thead> <tr> <th>Category</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Other Substances</td> <td>Substances which have been evaluated and found to fall outside Category X, Y or Z because they are considered to present no harm to marine resources, human health, amenities or other legitimate uses of the sea when discharged into the sea from tank cleaning of deballasting operations. The discharge of bilge or ballast water or other residues or mixtures containing these substances are not subject to any requirements of MARPOL Annex II.</td> </tr> </tbody> </table>	Category	Description	Other Substances	Substances which have been evaluated and found to fall outside Category X, Y or Z because they are considered to present no harm to marine resources, human health, amenities or other legitimate uses of the sea when discharged into the sea from tank cleaning of deballasting operations. The discharge of bilge or ballast water or other residues or mixtures containing these substances are not subject to any requirements of MARPOL Annex II.
Category	Description				
Other Substances	Substances which have been evaluated and found to fall outside Category X, Y or Z because they are considered to present no harm to marine resources, human health, amenities or other legitimate uses of the sea when discharged into the sea from tank cleaning of deballasting operations. The discharge of bilge or ballast water or other residues or mixtures containing these substances are not subject to any requirements of MARPOL Annex II.				

Transportation data

Transport mode	Bulk,Packaged
Package group	III
Cargo group	40
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	glycol ethers
IMO class	3.3

Reactivity data

Abilities	Miscible in water.
Acid(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Interference with coastal amenities (E2)	G - Gas
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Human toxicity threshold



IDHL	2000
Hazard statements	Physical
	H226 Flammable liquid and vapour.
	Health
	H302 Harmful if swallowed.
	H312 Harmful in contact with skin.
	H332 Harmful if inhaled.
	H360 May damage fertility or the unborn child.
Precautionary statements	Prevention
	P201 Obtain special instructions before use.
	P202 Do not handle until all safety precautions have been read and understood.
	P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
	P233 Keep container tightly closed.
	P240 Ground/bond container and receiving equipment.
	P241 Use explosion-proof electrical/ventilating/lighting/.../equipment.
	P242 Use only non-sparking tools.
	P243 Take precautionary measures against static discharge.
	P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
	P264 Wash ... thoroughly after handling.
	P270 Do not eat, drink or smoke when using this product.
	P271 Use only outdoors or in a well-ventilated area.
	P280 Wear protective gloves/protective clothing/eye protection/face protection.
	P281 Use personal protective equipment as required.
	Response

P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P303 + P361 + P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P308 + P313	IF exposed or concerned: Get medical advice/attention.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P322	Specific measures (see ... on this label).
P330	Rinse mouth.
P363	Wash contaminated clothing before reuse.
P370 + P378	In case of fire: Use ... for extinction.

Storage

P403 + P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.

Disposal

P501	Dispose of contents/container to ...
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TLV-TWA	25
TEEL-1 (mg/m3)	0.35 ppm
TEEL-2 (mg/m3)	2.5 ppm
TEEL-3 (mg/m3)	200 ppm

Ecotoxicity

Lowest median lethal concentration (LC50) on crustacean (mg/l)	1000
Lowest median lethal concentration (LC50) on fishes (mg/l)	> 10000
Assessment factor (AF)	500 on the short term
Predicted No Effect Concentration (PNEC) (µg/l)	1000 [µg/l] on the short term

ETHYLENE GLYCOL PHENYL ETHER

CAS Number: 122-99-6

Also known as: AROSOL

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 122-99-6

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1100 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	138.2
Density of gas (kg/m ³)	6.19
Boiling Point (°C)	242
Melting Point (°C)	14
Vapour Pressure (Pa)	5200 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	500
Flash Point (°C)	121

Behaviour at sea

Additional data

Colour	colourless
Odour	characteristic, pleasant

Transportation data

Cargo group	40
Temperature (°C)	ambient
Family name	glycol ethers

Reactivity data

Water	No
Acid(s)	Yes

Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	SD - Sinker/Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

TEEL-1 (mg/m3)	20 ppm
TEEL-2 (mg/m3)	20 ppm
TEEL-3 (mg/m3)	100 ppm

Ecotoxicity

ETHYLENE OXIDE (< 0.2% nitrogen)

UN Number: 1040 - CAS Number: 75-21-8

Also known as: ANPROLENE (T), DIHYDROOXIRANE, DIMETHYLENE OXIDE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1040
CAS number	75-21-8

Physical chemical data

Physical State (20°C)	Gas
Density (kg/m ³)	1.935 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	44.05
Density of gas (kg/m ³)	1.935
Boiling Point (°C)	10.8
Melting Point (°C)	-112
Vapour Pressure (Pa)	150000 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	440
Flash Point (°C)	-18
Upper explosivity limit (UEL) (volume %)	100

Behaviour at sea

Additional data

Colour	colourless
Odour	sweet odour
Standard behavior classification	GD

Transportation data

Transport mode	Gas, Packaged
Ship type	1G
State	liq.compr.gas
Temperature (°C)	ambient

Pressure (Pa)	under pressure
IMO class	2(2.3)

Reactivity data

Water	Yes
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	No
Static electricity	Yes
Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	GD - Gas/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

IDHL	800
ERPG-2 (ppm)	50
ERPG-3 (ppm)	500

Ecotoxicity

ETHYLENEDIAMINE

UN Number: 1604 - CAS Number: 107-15-3

Also known as: 1,2-DIAMINOETHANE, DIMETHYLENEDIAMINE, Ethane-1,2-Diamine, 1,2-Ethanediamine, Ethylenediamine

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1604
CAS number	107-15-3
Formula	C ₂ H ₈ N ₂

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	909 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	0.017151 [cSt] at a temperature of 25°C
Molar mass (g/mol)	60.1
Density of gas (kg/m ³)	2.709
Solubility (g/L)	110000 [g/L] at a temperature of 20°C and salinity of 0‰
Boiling Point (°C)	117
Melting Point (°C)	11.14
Critical temperature (°C)	613.1
Critical pressure (Pa)	6710000
Vapour Pressure (Pa)	1200 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	385
Flash Point (°C)	34
Flash Point (Pensky-Martens closed cup) (°C)	34
Lower explosivity limit (LEL) (volume %)	5.8
Upper explosivity limit (UEL) (volume %)	11.1
Vapor enthalpy (J/Kg)	631968 [J/Kg] at a temperature of 117°C 748444 [J/Kg] at a temperature of 25°C
Specific heat capacity (J/(Kg·K))	2872
Henry's constant (mol/(m ³ ·Pa))	0.00018

Behaviour at sea

Log kow	-1.3
Log koc	1.17
Bioconcentration factor (BCF)	1

Additional data

Colour	colourless
Odour	mild ammonia odour

MARPOL pollution category	Category	Description
	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.

Transportation data

Transport mode	Bulk, Packaged
Package group	II
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	under pressure
Family name	aliphatic amines

Reactivity data

Water	Yes
Abilities	Miscible in water.
Acid(s)	Yes
Base(s)	No
Metal(s) and alloys	No
Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	1 - ≥1 and <10
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic

Chronic aquatic toxicity (B2) (NOEC (mg/l))	1 - Low
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



IDHL	2000
Hazard statements	Physical
	H226 Flammable liquid and vapour.
	Health
	H302 Harmful if swallowed.
	H311 Toxic in contact with skin.
	H314 Causes severe skin burns and eye damage.
	H317 May cause an allergic skin reaction.
	H332 Harmful if inhaled.
	H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
	Environmental
H412 Harmful to aquatic life with long lasting effects.	

Precautionary statements	General
	P101 If medical advice is needed, have product container or label at hand.
	P102 Keep out of reach of children.
	Prevention
	P260 Do not breathe dust/fume/gas/mist/vapours/spray.
	P273 Avoid release to the environment.
	P280 Wear protective gloves/protective clothing/eye protection/face protection.
	Response
	P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P308 + P313 IF exposed or concerned: Get medical advice/attention.
	Storage
	P405 Store locked up.
	Disposal
	P501 Dispose of contents/container to ...

TLV-TWA	10				
	10 min	30 min	60 min	4 hrs	8 hrs
AEGL-2 (ppm)	12	12	9.7	6.1	4.8
AEGL-3 (ppm)	25	25	20	13	10

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	61
Lowest median lethal concentration (LC50) on crustacean (mg/l)	3
Lowest median lethal concentration (LC50) on fishes (mg/l)	115.7
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	0.16
Highest no observed effect concentration (NOEC) on fishes (mg/l)	> 10
Assessment factor (AF)	100 on the short term
Predicted No Effect Concentration (PNEC) (µg/l)	2 [µg/l] on the short term

ETHYLIDENE NORBORNENE

CAS Number: 16219-75-3

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

CAS number 16219-75-3

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	896 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	120.2
Density of gas (kg/m ³)	5.418
Boiling Point (°C)	147.8
Melting Point (°C)	-80
Vapour Pressure (Pa)	540 [Pa] at a temperature of 20°C
Flash Point (°C)	33
Lower explosivity limit (LEL) (volume %)	0.9
Upper explosivity limit (UEL) (volume %)	6.4

Behaviour at sea

Additional data

Colour	white
Odour	turpentine odour
Standard behavior classification	FE

Transportation data

State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient

Reactivity data

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	3 - ≥ 3 and < 4
Bioaccumulation in BCF (A1B)	3 - ≥ 100 and < 500
Bioaccumulation (A1)	3 - Moderate potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	FE - Floater/Evaporator
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

ERPG-1 (ppm)	0.2
ERPG-2 (ppm)	100
ERPG-3 (ppm)	500

Ecotoxicity

Fatty Acid Methyl Esters

Also known as: Fame, Fatty Acid Methyl Esters, Ester Methylique D'Acide Gras

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Formula $\text{CH}_3(\text{CH}_2)_n\text{COOCH}_3$

Physical chemical data

Physical State (25°C)	Liquid
Mixed	Yes
Kinematic viscosity (cSt)	4.5 [cSt] at a temperature of 20°C
Solubility (g/L)	0 [g/L] at a temperature of 20°C and salinity of 0‰
Boiling Point (°C)	302
Melting Point (°C)	-12

Behaviour at sea

Additional data

MARPOL pollution category	Category	Description
	Other Substances	Substances which have been evaluated and found to fall outside Category X, Y or Z because they are considered to present no harm to marine resources, human health, amenities or other legitimate uses of the sea when discharged into the sea from tank cleaning or deballasting operations. The discharge of bilge or ballast water or other residues or mixtures containing these substances are not subject to any requirements of MARPOL Annex II.

Transportation data

Reactivity data

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	Fp - Persistent slick forming substance
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

Predicted No Effect Concentration (PNEC) (µg/l)	0.2504 [µg/l] on the short term
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FERRIC CHLORIDE anhydrous

UN Number: 1773 - CAS Number: 7705-08-0

Also known as: CHLORURE FERRIQUE anhydre

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1773
CAS number	7705-08-0

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	2900 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	162.22
Boiling Point (°C)	315
Melting Point (°C)	306

Behaviour at sea

Persistence (days)	0.8
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Additional data

Colour	greenish black
Odour	odourless
Standard behavior classification	SD

Transportation data

Package group	III
State	solid
Temperature (°C)	ambient
Pressure (Pa)	ambient

Reactivity data

Water	No
Acid(s)	No

Base(s)	No
Metal(s) and alloys	Yes
Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Bioaccumulation in BCF (A1B)	5 - ≥ 4000
Bioaccumulation (A1)	5 - Very high potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TLV-TWA	0.4 (Fe)
TEEL-1 (mg/m3)	3.5
TEEL-2 (mg/m3)	25
TEEL-3 (mg/m3)	125

Ecotoxicity

FERRIC CHLORIDE solutions (39%)

UN Number: 2582 - CAS Number: 7705-08-0

Also known as: CHLORURE DE FER (III), CHLORURE FERRIQUE en solution (39%)

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2582
CAS number	7705-08-0

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1410 [Kg/m ³] at a temperature of 20°C
Boiling Point (°C)	110
Melting Point (°C)	-2
Vapour Pressure (Pa)	1466 [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Colour	orange/brown
Odour	pungent

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	43
State	liquid
Temperature (°C)	ambient
Family name	miscell. water solut.

Reactivity data

Water	No
Acid(s)	Yes

Metal(s) and alloys	Yes
Combustibles	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in BCF (A1B)	5 - ≥ 4000
Bioaccumulation (A1)	5 - Very high potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TEEL-1 (mg/m3)	3.5
TEEL-2 (mg/m3)	25
TEEL-3 (mg/m3)	125

Ecotoxicity

FERRIC NITRATE

UN Number: 1466

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1466

Physical chemical data

Physical State (20°C) Solid

Density (kg/m³) 1700 [Kg/m³] at a temperature of 20°C

Behaviour at sea

Additional data

Colour green, colourless to violet

Odour odourless

Standard behavior classification SD

Transportation data

Package group III

State solid

Temperature (°C) ambient

Pressure (Pa) ambient

IMO class 5.1

Reactivity data

Water No

Acid(s) No

Base(s) No

Metal(s) and alloys Yes

Oxidizing agents No

Reducing agents No

Combustibles No

Organic substance No

GESAMP Hazard profile

Bioaccumulation in BCF (A1B)	5 - ≥ 4000
Bioaccumulation (A1)	5 - Very high potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TLV-TWA	0.4 (Fe)
TEEL-1 (mg/m3)	13
TEEL-2 (mg/m3)	21.7
TEEL-3 (mg/m3)	100

Ecotoxicity

FIRE EXTINGUISHERS (containing compressed or liquified gas)

UN Number: 1044

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1044

Physical chemical data

Physical State (20°C) Gas

Behaviour at sea

Additional data

Standard behavior classification GD, G

Transportation data

State liq.compr.gas

IMO class 2(2.2)

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

Ecotoxicity

FLUOROSILICIC ACID

UN Number: 1778 - CAS Number: 16961-83-4

Also known as: ACIDE FLUOROSILICIQUE

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number	1778
CAS number	16961-83-4

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1290 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	144.09
Density of gas (kg/m ³)	6.44
Boiling Point (°C)	109
Melting Point (°C)	1.727272727
Vapour Pressure (Pa)	2000 [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Colour	colourless
Odour	sharp, unpleasant

Transportation data

Transport mode	Bulk, Packaged
Package group	II
State	liquid
Family name	non oxid. min. acids

Reactivity data

Water	Yes
Acid(s)	Yes

Base(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	4 - High
Skin irritation/corrosivity (D1)	3 - Corrosive
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TEEL-1 (mg/m3)	9.48
TEEL-2 (mg/m3)	15.8
TEEL-3 (mg/m3)	50

Ecotoxicity

FORMALDEHYDE flammable solutions

UN Number: 1198 - CAS Number: 50-00-0

Also known as: Formaldehyde Solutions (45% Or Less), Solutions De Formaldhyde (45% Ou Moins)

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1198
CAS number	50-00-0
Formula	CH ₂ O

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	1100 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	18
Density of gas (kg/m ³)	1.33
Solubility (g/L)	10000000 [g/L] at a temperature of 20°C and salinity of 0‰
Boiling Point (°C)	-20
Melting Point (°C)	-15
Vapour Pressure (Pa)	133 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	430
Flash Point (°C)	68
Upper explosivity limit (UEL) (volume %)	73

Behaviour at sea

Additional data

Colour	colourless
Odour	irritating odour

MARPOL pollution category	Category	Description
	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	19
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	under pressure
Family name	aldehydes
IMO class	3.3

Reactivity data

Abilities	Solution.
Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver

Effects on wildlife and bottom habitats (E3)

3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

IDHL 30

Hazard statements	Health
	H301 Toxic if swallowed.
	H311 Toxic in contact with skin.
	H314 Causes severe skin burns and eye damage.
	H317 May cause an allergic skin reaction.
	H331 Toxic if inhaled.
	H351 Suspected of causing cancer.

Precautionary statements	Prevention
	P201 Obtain special instructions before use.
	P260 Do not breathe dust/fume/gas/mist/vapours/spray.
	P280 Wear protective gloves/protective clothing/eye protection/face protection.
	Response
	P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
	P312 Call a POISON CENTER or doctor/physician if you feel unwell.
	P361 Remove/Take off immediately all contaminated clothing.
	P370 + P378 In case of fire: Use ... for extinction.
	Storage
	P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

ERPG-2 (ppm) 10

ERPG-3 (ppm) 25

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	14.7
Lowest median lethal concentration (LC50) on crustacean (mg/l)	14.7
Lowest median lethal concentration (LC50) on fishes (mg/l)	6.7
Predicted No Effect Concentration (PNEC) (µg/l)	5.8 [µg/l] on the short term

FORMAMIDE

CAS Number: 75-12-7

Also known as: CARBAMALDEHYDE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 75-12-7

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1100 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	45.04
Density of gas (kg/m ³)	2.06
Boiling Point (°C)	210.5
Melting Point (°C)	2.6
Vapour Pressure (Pa)	130 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	> 500
Flash Point (°C)	154

Behaviour at sea

Additional data

Colour	colourless to pale yellow
Odour	ammonia-like

Transportation data

Cargo group	10
State	liquid
Temperature (°C)	ambient
Family name	amides

Reactivity data

Water	No
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Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes
Reducing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Specific Health Concern (D3)	R - Reprotoxicity
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TEEL-1 (mg/m3)	20 ppm
TEEL-2 (mg/m3)	125 ppm
TEEL-3 (mg/m3)	1250 ppm

Ecotoxicity

FORMIC ACID

UN Number: 1779 - CAS Number: 64-18-6

Also known as: ACIDE FORMIQUE, Methanoic Acid, Formilic Acid, Aminic Acid, Formic Acid

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1779
CAS number	64-18-6
Formula	CH ₂ O ₂

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	1220 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	1.3172 [cSt] at a temperature of 25°C
Molar mass (g/mol)	46.03
Density of gas (kg/m ³)	2.051
Solubility (g/L)	1000000 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	101
Melting Point (°C)	8.3
Critical temperature (°C)	588
Surface tension (mN/m)	34.38 [mN/m] at a temperature of 25°C
Interfacial tension (mN/m)	1.32 [mN/m] at a temperature of 25°C and salinity of 0‰
Vapour Pressure (Pa)	4399 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	600
Flash Point (°C)	69
Flash Point (Pensky-Martens closed cup) (°C)	69
Flash Point (Cleveland open cup) (°C)	50
Lower explosivity limit (LEL) (volume %)	18
Upper explosivity limit (UEL) (volume %)	57
Vapor enthalpy (J/Kg)	492982 [J/Kg] at a temperature of 101°C 436710 [J/Kg] at a temperature of 25°C
Combustion enthalpy (J/Kg)	5531656
Specific heat capacity (J/(Kg·K))	2151

Henry's constant (mol/(m ³ ·Pa))	0.017
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Behaviour at sea

Log kow	-0.22
Log koc	0
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Bioconcentration factor (BCF)	3.2

Additional data

Colour	colourless				
Odour	penetrating odour				
MARPOL pollution category	<table border="1"> <thead> <tr> <th>Category</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Y</td> <td>Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.</td> </tr> </tbody> </table>	Category	Description	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.
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Transportation data

Transport mode	Bulk, Packaged
Package group	II
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	under pressure
Family name	organic acids

Reactivity data

Abilities	Miscible in water.
Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight

Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	3C - Corrosive
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



IDHL	30
Hazard statements	Physical
	H226 Flammable liquid and vapour.
	Health
	H302 Harmful if swallowed.
	H314 Causes severe skin burns and eye damage. H331 Toxic if inhaled.
Precautionary statements	Prevention
	P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
	P280 Wear protective gloves/protective clothing/eye protection/face protection.
	Response
	P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
TEEL-1 (mg/m3)	0.92 ppm
TEEL-2 (mg/m3)	0.92 ppm
TEEL-3 (mg/m3)	30 ppm

Ecotoxicity

Lowest median lethal concentration (LC50) on crustacean (mg/l)	34
Lowest median lethal concentration (LC50) on fishes (mg/l)	46
Assessment factor (AF)	500 on the short term
Predicted No Effect Concentration (PNEC) (µg/l)	200 [µg/l] on the short term

FUEL AVIATION TURBINE ENGINE

UN Number: 1863

Also known as: CARBUREACTEUR

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number 1863

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	810 [Kg/m ³] at a temperature of 20°C
Boiling Point (°C)	176
Vapour Pressure (Pa)	400 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	220
Flash Point (°C)	30
Lower explosivity limit (LEL) (volume %)	1.3

Behaviour at sea

Additional data

Colour	colourless
Odour	gasoline odour
Standard behavior classification	E, FE, F

Transportation data

Transport mode	Bulk, Packaged
Package group	I/II/III
Cargo group	33
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	miscell. hydroc. mixt
IMO class	3.1/3.2/3.

Reactivity data

Acid(s)	Yes
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Oxidizing agents	Yes
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GESAMP Hazard profile

Human toxicity threshold

TLV-TWA	200
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Ecotoxicity

FURATHIOCARB

UN Number: 2982

Also known as: APRON

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 2982

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1160 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	382.48
Boiling Point (°C)	160 (1.33 Pa)
Vapour Pressure (Pa)	8.4*10 ⁻⁵ [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Colour	yellow
Marine pollutant	P

Transportation data

Package group	I/II/III
IMO class	6.1

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

Ecotoxicity

FURFURAL

UN Number: 1199 - CAS Number: 98-01-1

Also known as: ANT OIL (ARTIFICIAL), BRAN OIL

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number	1199
CAS number	98-01-1

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1159 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	96.08
Density of gas (kg/m ³)	4.269
Boiling Point (°C)	161.9
Melting Point (°C)	-34
Vapour Pressure (Pa)	140 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	315
Flash Point (°C)	56
Lower explosivity limit (LEL) (volume %)	2.1
Upper explosivity limit (UEL) (volume %)	19.3

Behaviour at sea

Additional data

Colour	colorless to reddish-brown
Odour	almond odour

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	19
State	liquid

Temperature (°C)	ambient
Pressure (Pa)	under pressure
Family name	aldehydes
IMO class	6.1

Reactivity data

Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	1 - Low
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Specific Health Concern (D3)	C - Carcinogenicity
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

IDHL	250
ERPG-2 (ppm)	10
ERPG-3 (ppm)	100

Ecotoxicity

FURFURYL ALCOHOL

UN Number: 2874 - CAS Number: 98-00-0

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2874
CAS number	98-00-0

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1130 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	98.1
Density of gas (kg/m ³)	4.23
Boiling Point (°C)	170
Melting Point (°C)	-34
Vapour Pressure (Pa)	50 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	315
Flash Point (°C)	52
Lower explosivity limit (LEL) (volume %)	1.8
Upper explosivity limit (UEL) (volume %)	16.3

Behaviour at sea

Additional data

Colour	colourless to light yellow
Odour	mild irritating odour

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	20
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient

Family name	alcohols, glycols
IMO class	6.1

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	No
Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

IDHL	250
TLV-TWA	10
TEEL-1 (mg/m3)	15 ppm
TEEL-2 (mg/m3)	15 ppm
TEEL-3 (mg/m3)	75 ppm

Ecotoxicity

GAS OIL

UN Number: 1202

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1202

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	848 [Kg/m ³] at a temperature of 20°C
Boiling Point (°C)	190
Melting Point (°C)	-23
Vapour Pressure (Pa)	400 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	250
Flash Point (°C)	62
Upper explosivity limit (UEL) (volume %)	13.5

Behaviour at sea

Additional data

Colour	colourless
Odour	gasoline odour
Standard behavior classification	E, FE, F

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	33
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	miscell. hydroc. mixt
IMO class	3.3

Reactivity data

Acid(s) Yes

Oxidizing agents Yes

GESAMP Hazard profile

Human toxicity threshold

Ecotoxicity

GASOLINE

UN Number: 1203

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1203

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	732 [Kg/m ³] at a temperature of 20°C
Boiling Point (°C)	14 /71
Vapour Pressure (Pa)	400 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	250
Flash Point (°C)	-18
Lower explosivity limit (LEL) (volume %)	1.1
Upper explosivity limit (UEL) (volume %)	8.7

Behaviour at sea

Additional data

Colour	colourless to brown,purple
Odour	gasoline odour
Standard behavior classification	E, FE, F

Transportation data

Transport mode	Bulk,Packaged
Package group	II
Cargo group	33
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	miscell. hydroc. mixt
IMO class	3.1

Reactivity data

Acid(s)	Yes
Static electricity	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m3)	500 ppm
TEEL-2 (mg/m3)	500 ppm
TEEL-3 (mg/m3)	1500 ppm

Ecotoxicity

GLUCOSE

Also known as: DEXTROSE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Solid
Molar mass (g/mol)	180.16
Melting Point (°C)	146

Behaviour at sea

Additional data

Colour	white
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Transportation data

State	solid
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Reactivity data

Reducing agents	Yes
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GESAMP Hazard profile

Human toxicity threshold

Ecotoxicity

GLUTARALDEHYDE solution

Also known as: ALDEHYDE GLUTARIQUE en solution

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1093 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	100.1
Density of gas (kg/m ³)	4.515
Boiling Point (°C)	187
Melting Point (°C)	-14
Vapour Pressure (Pa)	2300 [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Colour	light yellow
Odour	rotten apple odour

Transportation data

Cargo group	19
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	aldehydes

Reactivity data

Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Human toxicity threshold

TLV-TWA	0.2
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ERPG-1 (ppm)	0.2
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Ecotoxicity

GLYCERINE

CAS Number: 56-81-5

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 56-81-5

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1261 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	92.1
Density of gas (kg/m ³)	4.089
Boiling Point (°C)	290
Melting Point (°C)	18
Vapour Pressure (Pa)	10100 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	400
Flash Point (°C)	160

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless
Standard behavior classification	DE, D

Transportation data

Cargo group	20
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	alcohols, glycols

Reactivity data

Acid(s)	Yes
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Base(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	0 - Not irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	1 - Is a floater; and/or is slightly acutely toxic; and/or is mildly irritant to skin and/or eyes

Human toxicity threshold

TLV-TWA	2.5
TEEL-1 (mg/m3)	125
TEEL-2 (mg/m3)	500
TEEL-3 (mg/m3)	500

Ecotoxicity

GLYCEROL MONOOLEATE

CAS Number: 25496-72-4

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 25496-72-4

Physical chemical data


Physical State (20°C)	Solid
Density (kg/m ³)	950 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	356
Boiling Point (°C)	> 100
Melting Point (°C)	25/34
Flash Point (°C)	224

Behaviour at sea

Additional data

Colour	yellow
Odour	sweet

Transportation data

State	solid
Temperature (°C)	< 34  C
Family name	alcohols, glycols

Reactivity data

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic

Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	Fp - Persistent slick forming substance
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

GLYOXAL solutions (40% or less)

CAS Number: 107-22-2

Also known as: BIFORMYL, DIFORMYL

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 107-22-2

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1290 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	58
Boiling Point (°C)	104
Melting Point (°C)	-15
Vapour Pressure (Pa)	2400 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	285
Flash Point (°C)	>100

Behaviour at sea

Additional data

Colour	light yellow
Odour	weak sour

Transportation data

Cargo group	19
State	liquid
Temperature (°C)	-0.244897959
Family name	aldehydes

Reactivity data

Water	No
Acid(s)	Yes

Base(s)	Yes
Metal(s) and alloys	Yes
Oxidizing agents	Yes
Combustibles	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TEEL-1 (mg/m3)	35
TEEL-2 (mg/m3)	75
TEEL-3 (mg/m3)	75

Ecotoxicity

HELIUM (compressed gas)

UN Number: 1046

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1046

Physical chemical data

Physical State (20°C)	Gas
Density (kg/m ³)	1.25 [Kg/m ³] at a temperature of 20°C
Density of gas (kg/m ³)	1.25
Boiling Point (°C)	-268.75
Melting Point (°C)	-272.2
Vapour Pressure (Pa)	25000000 [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Transportation data

State	liq.compr.gas
IMO class	2(2.2)

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m ³)	65000 ppm
TEEL-2 (mg/m ³)	230000 ppm
TEEL-3 (mg/m ³)	400000 ppm

Ecotoxicity

HELIUM (refrigerated liquid)

UN Number: 1963

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1963

Physical chemical data

Physical State (20°C)	Gas
Density (kg/m ³)	1.25 [Kg/m ³] at a temperature of 20°C
Density of gas (kg/m ³)	1.25
Boiling Point (°C)	-268.75
Melting Point (°C)	-272.2
Vapour Pressure (Pa)	25000000 [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Transportation data

State	liquefied gas
IMO class	2(2.2)

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m ³)	65000 ppm
TEEL-2 (mg/m ³)	230000 ppm
TEEL-3 (mg/m ³)	400000 ppm

Ecotoxicity

HEPTACHLOR solid

UN Number: 2761

Also known as: AGROARES, 2-CHLOROCHLORIDENE, DRINOX

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 2761

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	1660 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	373.5
Boiling Point (°C)	160
Melting Point (°C)	95

Behaviour at sea

Additional data

Colour	white to light tan
Odour	camphor odour
Marine pollutant	P
Standard behavior classification	D, SD, S

Transportation data

Transport mode	Bulk, Packaged
State	solid
Temperature (°C)	ambient
Pressure (Pa)	ambient
IMO class	6.1

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

IDHL	45
TLV-TWA	0.03
TEEL-1 (mg/m3)	0.5
TEEL-2 (mg/m3)	0.5
TEEL-3 (mg/m3)	35

Ecotoxicity

HEPTANE

UN Number: 1206 - CAS Number: 142-82-5

Also known as: DIPROPYLMETHANE, Heptane, Heptyl Hydride, N-Heptane

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1206
CAS number	142-82-5
Formula	C ₇ H ₁₆

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	683.8 [Kg/m ³] at a temperature of 20°C 697.1 [Kg/m ³] at a temperature of 5°C 693.8 [Kg/m ³] at a temperature of 10°C 685.3 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	0.6 [cSt] at a temperature of 20°C 0.57 [cSt] at a temperature of 25°C 2.037 [cSt] at a temperature of 5°C 1.989 [cSt] at a temperature of 10°C 1.9408 [cSt] at a temperature of 20°C
Molar mass (g/mol)	100.21
Density of gas (kg/m ³)	4.463
Solubility (g/L)	3 [g/L] at a temperature of 25°C and salinity of 0‰ 3.2 [g/L] at a temperature of 20°C and salinity of 0‰ 2.8 [g/L] at a temperature of 20°C and salinity of 5‰ 0.48 [g/L] at a temperature of 20°C and salinity of 30‰
Boiling Point (°C)	98
Melting Point (°C)	-91

Surface tension (mN/m)	19.3 [mN/m] at a temperature of 20°C
	19.65 [mN/m] at a temperature of 25°C
	21.6 [mN/m] at a temperature of 6°C
	21.08 [mN/m] at a temperature of 10.1°C
	20.32 [mN/m] at a temperature of 18.1°C
Interfacial tension (mN/m)	51 [mN/m] at a temperature of 20°C and salinity of 0‰
Vapour Pressure (Pa)	4799 [Pa] at a temperature of 20°C
	6133 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	220
Flash Point (°C)	-4
Flash Point (Pensky-Martens closed cup) (°C)	-4
Lower explosivity limit (LEL) (volume %)	1.2
Upper explosivity limit (UEL) (volume %)	6.7
Vapor enthalpy (J/Kg)	317065 [J/Kg] at a temperature of 98°C
	364960 [J/Kg] at a temperature of 25°C
Combust enthalpy (J/Kg)	44600000
Specific heat capacity (J/(Kg·K))	2242.4
Combustion efficiency (%)	97
Mass flow rate of the combustion surface (Kg/(m²·s))	0.11
Rad fraction (%)	33
Henry's constant (mol/(m³·Pa))	202650

Behaviour at sea

Log kow	4.66
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Biodegradation in marine environment (Half-life) (days)	10
Bioconcentration factor (BCF)	1480

Additional data

Colour	colourless				
Odour	gasoline odour				
MARPOL pollution category	<table border="1"> <thead> <tr> <th>Category</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>X</td> <td>Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a major hazard to either marine resources or human health and, therefore, justify the prohibition of the discharge into the marine environment.</td> </tr> </tbody> </table>	Category	Description	X	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a major hazard to either marine resources or human health and, therefore, justify the prohibition of the discharge into the marine environment.
Category	Description				
X	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a major hazard to either marine resources or human health and, therefore, justify the prohibition of the discharge into the marine environment.				

Transportation data

Package group	II
Cargo group	31

State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	paraffins
IMO class	3.2

Reactivity data

Water	No
Static electricity	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	4 - ≥ 4 and < 5
Bioaccumulation (A1)	4 - High potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Specific Health Concern (D3)	A - Aspiration
Interference with coastal amenities (E2)	E - Evaporator
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold



IDHL	5000	
Hazard statements	Physical	
	H225	Highly flammable liquid and vapour.
	Health	
	H304	May be fatal if swallowed and enters airways.
	H315	Causes skin irritation.
	H336	May cause drowsiness or dizziness.
	Environmental	
H410	Very toxic to aquatic life with long lasting effects.	

Precautionary statements	General	
	P102	Keep out of reach of children.
	Prevention	
	P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
	P273	Avoid release to the environment.
	P280	Wear protective gloves/protective clothing/eye protection/face protection.
	Response	
	P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
	P331	Do NOT induce vomiting.
	Disposal	
P501	Dispose of contents/container to ...	
TLV-TWA	400	
TEEL-1 (mg/m3)	440 ppm	
TEEL-2 (mg/m3)	440 ppm	
TEEL-3 (mg/m3)	750 ppm	

Ecotoxicity

Lowest median lethal concentration (LC50) on crustacean (mg/l)	0.1
Lowest median lethal concentration (LC50) on fishes (mg/l)	4
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	0.17
Highest no observed effect concentration (NOEC) on fishes (mg/l)	1.284

HEPTANOL

Also known as: ALCOHOL C7

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	822 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	116.2
Density of gas (kg/m ³)	5.16
Boiling Point (°C)	176
Melting Point (°C)	-30
Vapour Pressure (Pa)	100 [Pa] at a temperature of 20°C
Flash Point (°C)	65

Behaviour at sea

Additional data

Colour	colourless
Odour	weak alcohol odour

Transportation data

State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient

Reactivity data

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	2 - ≥ 2 and < 3
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable

Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	FD - Floater/Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

TEEL-1 (mg/m3)	10
TEEL-2 (mg/m3)	500
TEEL-3 (mg/m3)	500

Ecotoxicity

HEPTYL ACETATE

Also known as: ACETATE D'HEPTYLE, ACETIC ACID, HEPTYL ESTER

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m3)	875 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	158.27
Density of gas (kg/m3)	7.1
Boiling Point (°C)	192.5
Melting Point (°C)	-50.2
Flash Point (°C)	68

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless
Standard behavior classification	F/FE/E

Transportation data

Cargo group	34
State	liquid
Family name	esters

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	3 - ≥ 3 and < 4
Bioaccumulation (A1)	3 - Moderate potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	F - Floating substance, not likely to evaporate or to dissolve quickly
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

HEXACHLOROCYCLOPENTADIENE

UN Number: 2646

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 2646

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1720 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	272.7
Density of gas (kg/m ³)	12.15
Boiling Point (°C)	239
Melting Point (°C)	10
Vapour Pressure (Pa)	1241 (104°C) [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Colour	greenish yellow
Odour	harch unpleasant

Transportation data

State	liquid
Temperature (°C)	ambient
IMO class	6.1

Reactivity data

Water	Yes
Metal(s) and alloys	Yes (Fe & others)

GESAMP Hazard profile

Human toxicity threshold

TLV-TWA	0.01
TEEL-1 (mg/m3)	0.0179 ppm
TEEL-2 (mg/m3)	0.0179 ppm
TEEL-3 (mg/m3)	0.0179 ppm

Ecotoxicity

Hexamethylenediamine

UN Number: 2280 - CAS Number: 124-09-4

Also known as: 1,6-Hexanediamine, 1,6-Diaminohexane, Hexane-1,6-Diamine, Hmda, Hexamethylenediamine

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2280
CAS number	124-09-4
Formula	C ₆ H ₁₆ N ₂

Physical chemical data

Physical State (25°C)	Solid
Molar mass (g/mol)	116.204
Solubility (g/L)	10000000 [g/L] at a temperature of 20°C and salinity of 0‰
Boiling Point (°C)	204.6
Melting Point (°C)	39.13
Flash Point (Cleveland open cup) (°C)	71
Lower explosivity limit (LEL) (volume %)	0.7
Upper explosivity limit (UEL) (volume %)	6.3
Combustion enthalpy (J/Kg)	28400000
Henry's constant (mol/(m ³ ·Pa))	7e-05

Behaviour at sea

Log K _{ow}	0.35
Log K _{oc}	2.21
Biodegradation in marine environment (Half-life) (days)	Not biodegradable
Bioconcentration factor (BCF)	1

Additional data

MARPOL pollution category

Category Description

Y Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.

Transportation data

Reactivity data

Abilities

Soluble in water.

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	ED - Evaporator/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



Hazard statements

Health

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H335	May cause respiratory irritation.

Precautionary statements	Prevention
	P260 Do not breathe dust/fume/gas/mist/vapours/spray.
	P280 Wear protective gloves/protective clothing/eye protection/face protection.
	Response
	P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
	P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
	P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P310 Immediately call a POISON CENTER or doctor/physician.

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	14.8
Lowest median lethal concentration (LC50) on crustacean (mg/l)	23.4
Lowest median lethal concentration (LC50) on fishes (mg/l)	73.5
Highest no observed effect concentration (NOEC) on algae (mg/l)	3.2
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	4.16
Assessment factor (AF)	100 on the short term
Predicted No Effect Concentration (PNEC) (µg/l)	40 [µg/l] on the short term

HEXAMETHYLENEDIAMINE solution

UN Number: 1783

Also known as: 1,6-DIAMINO HEXANE

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number 1783

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	933 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	116.21
Density of gas (kg/m ³)	5.16
Boiling Point (°C)	205
Melting Point (°C)	41
Vapour Pressure (Pa)	400 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	305
Flash Point (°C)	80
Lower explosivity limit (LEL) (volume %)	0.7
Upper explosivity limit (UEL) (volume %)	6.3

Behaviour at sea

Additional data

Colour	colourless
Odour	weak ammonia odour

Transportation data

Transport mode	Bulk, Packaged
Package group	II
State	liquid, solid
Temperature (°C)	ambient
Pressure (Pa)	under pressure

Family name	aliphatic amines
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Reactivity data

Acid(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Human toxicity threshold

Ecotoxicity

HEXAMETHYLENEIMINE

UN Number: 2493 - CAS Number: 111-49-9

Also known as: AZACYCLOHEPTANE, CYCLO HEXAMETHYLENEAMINE

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number	2493
CAS number	111-49-9

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	880 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	99
Boiling Point (°C)	132
Vapour Pressure (Pa)	665 [Pa] at a temperature of 20°C
Lower explosivity limit (LEL) (volume %)	1.6
Upper explosivity limit (UEL) (volume %)	2.3

Behaviour at sea

Additional data

Colour	colourless to light yellow
Odour	ammonia odour

Transportation data

Transport mode	Bulk, Packaged
Package group	II
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	aliphatic amines
IMO class	3.2

Reactivity data

Acid(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	3 - Moderately high
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	FED - Floater/Evaporator/Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

TEEL-1 (mg/m3)	40
TEEL-2 (mg/m3)	300
TEEL-3 (mg/m3)	500

Ecotoxicity

Hexamethylenetetramine Solutions

UN Number: 1328 - CAS Number: 100-97-0

Also known as: Hexamethylenetetramine Solutions, Solutions D'Hexamethylene Tetramine

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1328
CAS number	100-97-0
Formula	C ₆ H ₁₂ N ₄

Physical chemical data

Physical State (25°C)	Liquid
Molar mass (g/mol)	140.186
Solubility (g/L)	10000000 [g/L] at a temperature of 20°C and salinity of 0‰

Behaviour at sea

Log kow	-2.13
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Additional data

MARPOL pollution category

Category	Description
Other Substances	Substances which have been evaluated and found to fall outside Category X, Y or Z because they are considered to present no harm to marine resources, human health, amenities or other legitimate uses of the sea when discharged into the sea from tank cleaning of deballasting operations. The discharge of bilge or ballast water or other residues or mixtures containing these substances are not subject to any requirements of MARPOL Annex II.

Transportation data

Reactivity data

Abilities	Solution.
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GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	ED - Evaporator/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



Hazard statements	Physical	
	H228	Flammable solid.
	Health	
	H317	May cause an allergic skin reaction.
Precautionary statements	Prevention	
	P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
	P241	Use explosion-proof electrical/ventilating/lighting/.../equipment.
	P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
	P280	Wear protective gloves/protective clothing/eye protection/face protection.
	Response	
	P302 + P352	IF ON SKIN: Wash with plenty of soap and water.

Ecotoxicity

HEXYL ACETATE

UN Number: 1233 - CAS Number: 142-92-7

Also known as: ACETATE D'HEXYLE, ACETIC ACID, HEXYL ESTER

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1233
CAS number	142-92-7

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	876 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	144.21
Density of gas (kg/m ³)	6.41
Boiling Point (°C)	168/170
Melting Point (°C)	-80
Vapour Pressure (Pa)	400 [Pa] at a temperature of 20°C
Flash Point (°C)	37
Lower explosivity limit (LEL) (volume %)	0.9
Upper explosivity limit (UEL) (volume %)	5.7

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless
Standard behavior classification	F/FE/E

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	34
State	liquid

Family name	esters
IMO class	3.3

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	2 - ≥ 2 and < 3
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	FE - Floater/Evaporator
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

HEXYLENE GLYCOL

CAS Number: 107-41-5

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 107-41-5

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	900 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	118.2
Density of gas (kg/m ³)	5.16
Boiling Point (°C)	196
Melting Point (°C)	-100
Vapour Pressure (Pa)	6.5 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	306
Flash Point (°C)	96
Lower explosivity limit (LEL) (volume %)	1.2
Upper explosivity limit (UEL) (volume %)	8.1

Behaviour at sea

Additional data

Colour	colourless
Odour	mild sweet

Transportation data

Cargo group	20
State	liquid
Temperature (°C)	ambient
Family name	alcohols, glycols

Reactivity data

Water	No
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Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes
Reducing agents	Yes
Combustibles	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

TLV-TWA	25
TEEL-1 (mg/m3)	10 ppm
TEEL-2 (mg/m3)	25 ppm
TEEL-3 (mg/m3)	350 ppm

Ecotoxicity

HYDRAZINE aqueous solut. (up to 64 wt% hydrazine)

UN Number: 2030

Also known as: DIAMIDE, DIAMINE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 2030

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1010 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	32.05
Density of gas (kg/m ³)	1.35
Boiling Point (°C)	113.7
Vapour Pressure (Pa)	1386 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	270
Flash Point (°C)	5-38
Lower explosivity limit (LEL) (volume %)	4.7
Upper explosivity limit (UEL) (volume %)	100

Behaviour at sea

Additional data

Colour	colourless
Odour	mild sweet odour

Transportation data

Package group	II
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	under pressure

Family name	aliphatic amines
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Reactivity data

Water	No
Acid(s)	Yes
Base(s)	No
Metal(s) and alloys	No
Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	Yes

GESAMP Hazard profile

Human toxicity threshold

IDHL	80
TLV-TWA	0.1
TEEL-1 (mg/m3)	0.0075
TEEL-2 (mg/m3)	0.0625
TEEL-3 (mg/m3)	50

Ecotoxicity

HYDROCHLORIC ACID solution

UN Number: 1789 - CAS Number: 7647-01-0

Also known as: ACIDE CHLORHYDRIQUE en solution, CHLOROHYDRIC ACID, Hydrochloric Acid Solutions (20%), Solutions D'Acide Chlorhydrique (20%)

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1789
CAS number	7647-01-0
Formula	HCl

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	1190 [Kg/m ³] at a temperature of 20°C 1098 [Kg/m ³] at a temperature of 25°C
Kinematic viscosity (cSt)	1.2386 [cSt] at a temperature of 20°C
Molar mass (g/mol)	36.5
Density of gas (kg/m ³)	1.677
Solubility (g/L)	10000000 [g/L] at a temperature of 20°C and salinity of 0‰
Boiling Point (°C)	50
Melting Point (°C)	-114
Vapour Pressure (Pa)	28000 [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Colour	colourless
Odour	sharp, irritating odour

MARPOL pollution category	Category	Description
	Z	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment.
Standard behavior classification	DE	

Transportation data

Transport mode	Bulk, Packaged
Package group	II
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	non oxid. min. acids

Reactivity data

Water	No
Abilities	Solution.
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	Yes
Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	DE - Dissolver/Evaporator

Effects on wildlife and bottom habitats (E3)

3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



IDHL	100				
Hazard statements	Health				
	H314	Causes severe skin burns and eye damage.			
	H331	Toxic if inhaled.			
Precautionary statements	General				
	P101	If medical advice is needed, have product container or label at hand.			
	Prevention				
	P261	Avoid breathing dust/fume/gas/mist/vapours/spray.			
	P280	Wear protective gloves/protective clothing/eye protection/face protection.			
	Response				
	P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.			
	P314	Get medical advice/attention if you feel unwell.			
	Storage				
	P403 + P233	Store in a well-ventilated place. Keep container tightly closed.			
P405	Store locked up.				
ERPG-2 (ppm)	20				
ERPG-3 (ppm)	150				
	10 min	30 min	60 min	4 hrs	8 hrs
AEGL-1 (ppm)	1.8	1.8	1.8	1.8	1.8
AEGL-2 (ppm)	100	43	22	11	11
AEGL-3 (ppm)	620	210	100	26	26

Ecotoxicity

HYDROGEN BROMIDE

UN Number: 1048

Also known as: ACIDE BROMIDRIQUE ANHYDRE, BROMURE D'HYDROGENE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1048

Physical chemical data

Physical State (20°C)	Gas
Density (kg/m ³)	2140 (-67°C) [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	80.92
Density of gas (kg/m ³)	3.5
Boiling Point (°C)	-66.8
Melting Point (°C)	-87
Vapour Pressure (Pa)	2445000 [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Colour	colourless
Odour	irritating
Standard behavior classification	DE

Transportation data

State	gas
Temperature (°C)	ambient or lower
IMO class	2(2.3)

Reactivity data

Water	Yes
Metal(s) and alloys	Yes

GESAMP Hazard profile

Human toxicity threshold

IDHL	30
TEEL-1 (mg/m3)	1 ppm
TEEL-2 (mg/m3)	22 ppm
TEEL-3 (mg/m3)	120 ppm

Ecotoxicity

HYDROGEN PEROXIDE solutions (8 to 60%)

UN Number: 2014 - CAS Number: 7722-84-1

Also known as: EAU OXYGENEE, Hydroperoxide, Hydrogen Peroxide, Peroxyde D'Hydrogene

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2014
CAS number	7722-84-1
Formula	H ₂ O ₂

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	1000/1200 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	34.01 (pure)
Density of gas (kg/m ³)	1.29/1.55
Solubility (g/L)	10000000 [g/L] at a temperature of 20°C and salinity of 0‰
Boiling Point (°C)	100/114
Melting Point (°C)	-50
Critical temperature (°C)	728
Critical pressure (Pa)	22000000
Surface tension (mN/m)	80.4 [mN/m] at a temperature of 20°C
Vapour Pressure (Pa)	40/100 [Pa] at a temperature of 20°C 262.6 [Pa] at a temperature of 25°C
Vapor enthalpy (J/Kg)	1517000 [J/Kg] at a temperature of 25°C
Specific heat capacity (J/(Kg·K))	2619
Henry's constant (mol/(m ³ ·Pa))	0.0007

Behaviour at sea

Log kow	-1.57
Log koc	1.12

Additional data

Colour	colourless				
Odour	slightly sharp				
MARPOL pollution category	<table border="1"> <thead> <tr> <th>Category</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Y</td> <td>Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.</td> </tr> </tbody> </table>	Category	Description	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.
Category	Description				
Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.				

Transportation data

Transport mode	Bulk, Packaged
Package group	I/II
State	liquid
Temperature (°C)	ambient
IMO class	5.1

Reactivity data

Water	No
Abilities	Miscible in water.
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	Yes
Oxidizing agents	Yes
Reducing agents	Yes
Combustibles	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



IDHL	75
Hazard statements	<p>Physical</p> <p>H271 May cause fire or explosion, strong oxidiser.</p> <p>Health</p> <p>H302 Harmful if swallowed.</p> <p>H314 Causes severe skin burns and eye damage.</p> <p>H332 Harmful if inhaled.</p> <p>H335 May cause respiratory irritation.</p> <p>Environmental</p> <p>H412 Harmful to aquatic life with long lasting effects.</p>
Precautionary statements	<p>Prevention</p> <p>P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.</p> <p>P280 Wear protective gloves/protective clothing/eye protection/face protection.</p> <p>Response</p> <p>P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.</p> <p>P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P370 + P378 In case of fire: Use ... for extinction.</p>
ERPG-1 (ppm)	10
ERPG-2 (ppm)	50
ERPG-3 (ppm)	100

Ecotoxicity

Lowest median lethal concentration (LC50) on crustacean (mg/l)	2.4
Lowest median lethal concentration (LC50) on fishes (mg/l)	0.1
Highest no observed effect concentration (NOEC) on algae (mg/l)	0.1
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	0.61
Highest no observed effect concentration (NOEC) on fishes (mg/l)	5
Assessment factor (AF)	50 on the short term
Predicted No Effect Concentration (PNEC) (µg/l)	10 [µg/l] on the short term

HYDROGEN PEROXIDE stabilized

UN Number: 2015

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 2015

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1290 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	34.01
Density of gas (kg/m ³)	1.548
Boiling Point (°C)	125
Melting Point (°C)	-30
Vapour Pressure (Pa)	100 [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Colour	colourless
Odour	weak sharp odour

Transportation data

Transport mode	Bulk, Packaged
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	under pressure
IMO class	5.1

Reactivity data

Water	No
Acid(s)	No
Base(s)	No
Metal(s) and alloys	Yes

Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

IDHL	75
ERPG-1 (ppm)	10
ERPG-2 (ppm)	50
ERPG-3 (ppm)	100

Ecotoxicity

HYDROGEN SULPHIDE

UN Number: 1053

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1053

Physical chemical data

Physical State (20°C)	Gas
Density (kg/m ³)	1.548 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	34.08
Density of gas (kg/m ³)	1.548
Boiling Point (°C)	-60.4
Melting Point (°C)	-86
Vapour Pressure (Pa)	1924700 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	260
Lower explosivity limit (LEL) (volume %)	4.3
Upper explosivity limit (UEL) (volume %)	45

Behaviour at sea

Additional data

Colour	colourless
Odour	rotten egg odour
Standard behavior classification	GD, G

Transportation data

State	liq.compr.gas
Temperature (°C)	ambient
Pressure (Pa)	under pressure
IMO class	2(2.3)

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

IDHL	300
TLV-TWA	10
ERPG-1 (ppm)	0.1
ERPG-2 (ppm)	30
ERPG-3 (ppm)	100

Ecotoxicity

IRON (III) OXIDE spent

UN Number: 1376

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1376

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	5240 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	159.69
Melting Point (°C)	1565

Behaviour at sea

Additional data

Colour	red to reddish-brown
Odour	odourless

Transportation data

Package group	III
State	solid
IMO class	4.2

Reactivity data

Water	No
Metal(s) and alloys	No
Oxidizing agents	No

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m ³)	15
TEEL-2 (mg/m ³)	40

Ecotoxicity

ISOAMYL ACETATE

UN Number: 1104

Also known as: ACETATE D'ISOAMYLE, ACETIC ACID, ISOPENTYL ESTER, AMYLACETIC ESTER, BANANA OIL (T)

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1104

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	876 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	130.19
Density of gas (kg/m ³)	5.805
Boiling Point (°C)	146
Melting Point (°C)	-78
Vapour Pressure (Pa)	650 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	380
Flash Point (°C)	25
Lower explosivity limit (LEL) (volume %)	1.1
Upper explosivity limit (UEL) (volume %)	7.5

Behaviour at sea

Persistence (days) 0.8

Additional data

Colour	colourless to yellow
Odour	banana odour
Standard behavior classification	FE

Transportation data

Transport mode	Bulk, Packaged
Package group	III

Cargo group	34
State	liquid
Temperature (°C)	ambient
Family name	esters
IMO class	3.3

Reactivity data

Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Human toxicity threshold

IDHL	3000
TLV-TWA	100
TEEL-1 (mg/m3)	100 ppm
TEEL-2 (mg/m3)	200 ppm
TEEL-3 (mg/m3)	1000 ppm

Ecotoxicity

ISOAMYL ALCOHOL

UN Number: 1105 - CAS Number: 123-51-3

Also known as: ALCOOL ISOAMYLIQUE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1105
CAS number	123-51-3

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	810 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	88.15
Density of gas (kg/m ³)	3.87
Boiling Point (°C)	132
Melting Point (°C)	-117
Vapour Pressure (Pa)	300 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	340
Flash Point (°C)	43
Lower explosivity limit (LEL) (volume %)	1.2

Behaviour at sea

Additional data

Colour	colourless
Odour	mild choking, alcohol odour
Standard behavior classification	FED

Transportation data

Package group	III
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient

IMO class	3.3
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Reactivity data

Static electricity	Yes
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GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation in BCF (A1B)	1 - ≥ 1 and < 10
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	FED - Floater/Evaporator/Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

IDHL	10000
TLV-TWA	100
TEEL-1 (mg/m3)	125 ppm
TEEL-2 (mg/m3)	125 ppm
TEEL-3 (mg/m3)	500 ppm

Ecotoxicity

ISOBUTANE

UN Number: 1969

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1969

Physical chemical data

Physical State (20°C)	Gas
Density (kg/m ³)	2.709 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	58.12
Density of gas (kg/m ³)	2.709
Boiling Point (°C)	-11.6
Melting Point (°C)	-160
Vapour Pressure (Pa)	202600 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	460
Flash Point (°C)	-20
Lower explosivity limit (LEL) (volume %)	1.8
Upper explosivity limit (UEL) (volume %)	8.4

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless

Transportation data

State	liq.compr.gas
Temperature (°C)	ambient
Pressure (Pa)	under pressure
IMO class	2(2.1)

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m3)	3000 ppm
TEEL-2 (mg/m3)	5000 ppm
TEEL-3 (mg/m3)	15000 ppm

Ecotoxicity

ISOBUTANOL

UN Number: 1212 - CAS Number: 78-83-1

Also known as: Alcool Isobutylique, Isobutanol, Isopropyl Carbinol, 1-Hydroxymethylpropane, 2-Methyl-1-Propanol, Isobutyl Alcohol

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1212
CAS number	78-83-1
Formula	C ₄ H ₁₀ O

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	802 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	5 [cSt] at a temperature of 20°C 4.1532 [cSt] at a temperature of 25°C
Molar mass (g/mol)	74.12
Density of gas (kg/m ³)	3.354
Solubility (g/L)	98000 [g/L] at a temperature of 20°C and salinity of 0‰ 85000 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	108.1
Melting Point (°C)	-108
Critical molar volume (m ³ /mol)	0.000274
Critical temperature (°C)	547.8
Critical pressure (Pa)	4295000
Vapour Pressure (Pa)	1200 [Pa] at a temperature of 20°C 1330 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	430
Flash Point (°C)	27
Flash Point (Pensky-Martens closed cup) (°C)	28
Flash Point (Cleveland open cup) (°C)	32.2
Lower explosivity limit (LEL) (volume %)	1.6
Upper explosivity limit (UEL) (volume %)	10.9

Vapor enthalpy (J/Kg)	524220 [J/Kg] at a temperature of 108°C 685645 [J/Kg] at a temperature of 25°C
Combust enthalpy (J/Kg)	35900000
Specific heat capacity (J/(Kg·K))	226.88
Combustion efficiency (%)	98
Mass flow rate of the combustion surface (Kg/(m ² ·s))	0.05
Rad fraction (%)	22
Henry's constant (mol/(m ³ ·Pa))	0.99

Behaviour at sea

Log kow	0.76
Log koc	1.75
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Biodegradation in marine environment (Half-life) (days)	10
Bioconcentration factor (BCF)	1.97

Additional data

Colour	colourless				
Odour	mild choking, alcohol odour				
MARPOL pollution category	<table border="1"> <thead> <tr> <th>Category</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Z</td> <td>Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment.</td> </tr> </tbody> </table>	Category	Description	Z	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment.
Category	Description				
Z	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment.				

Transportation data

Package group	III
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
IMO class	3.3

Reactivity data

Static electricity	Yes
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GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable

Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



IDHL	8000
Hazard statements	Physical
	H226 Flammable liquid and vapour.
	Health
	H315 Causes skin irritation.
	H318 Causes serious eye damage.
	H335 May cause respiratory irritation.
	H336 May cause drowsiness or dizziness.

Precautionary statements	Prevention
	P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
	P233 Keep container tightly closed.
	P240 Ground/bond container and receiving equipment.
	P241 Use explosion-proof electrical/ventilating/lighting/.../equipment.
	P242 Use only non-sparking tools.
	P243 Take precautionary measures against static discharge.
	P280 Wear protective gloves/protective clothing/eye protection/face protection.
	Response
	P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
	P370 + P378 In case of fire: Use ... for extinction.
	Storage
	P403 + P235 Store in a well-ventilated place. Keep cool.
	Disposal
	P501 Dispose of contents/container to ...

TLV-TWA	50
TEEL-1 (mg/m3)	1250 ppm
TEEL-2 (mg/m3)	1600 ppm
TEEL-3 (mg/m3)	1600 ppm

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	225
Lowest median lethal concentration (LC50) on crustacean (mg/l)	1100
Lowest median lethal concentration (LC50) on fishes (mg/l)	1430
Highest no observed effect concentration (NOEC) on algae (mg/l)	53
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	20
Assessment factor (AF)	1000 on the short term 10000 on the long term
Predicted No Effect Concentration (PNEC) (µg/l)	225 [µg/l] on the short term 22.5 [µg/l] on the long term

ISOBUTYL ACETATE

UN Number: 1213

Also known as: ACETATE D'ISOBUTYLE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1213

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	871 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	116.16
Density of gas (kg/m ³)	2.761
Boiling Point (°C)	117.5
Melting Point (°C)	-99
Vapour Pressure (Pa)	13333 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	420
Flash Point (°C)	18
Upper explosivity limit (UEL) (volume %)	15

Behaviour at sea

Additional data

Colour	colourless
Odour	pleasant, fruit odour

Transportation data

Transport mode	Bulk, Packaged
Package group	II
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
IMO class	3.2

Reactivity data

Water	No
Acid(s)	No
Base(s)	No
Metal(s) and alloys	No
Static electricity	Yes
Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

IDHL	7500
TLV-TWA	150
TEEL-1 (mg/m3)	150 ppm
TEEL-2 (mg/m3)	250 ppm
TEEL-3 (mg/m3)	1300 ppm

Ecotoxicity

ISOBUTYLENE

UN Number: 1055

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1055

Physical chemical data

Physical State (20°C)	Gas
Density (kg/m ³)	2.451 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	56.1
Density of gas (kg/m ³)	2.451
Boiling Point (°C)	-6.7
Melting Point (°C)	-140
Vapour Pressure (Pa)	19995 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	465
Flash Point (°C)	-76.1
Lower explosivity limit (LEL) (volume %)	1.8
Upper explosivity limit (UEL) (volume %)	9.6

Behaviour at sea

Additional data

Colour	colourless
Odour	sweet, gasoline odour

Transportation data

State	liq.compr.gas
Temperature (°C)	ambient
Pressure (Pa)	under pressure
IMO class	2(2.1)

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m3)	750 ppm
TEEL-2 (mg/m3)	1250 ppm
TEEL-3 (mg/m3)	100000 ppm

Ecotoxicity

ISODECALDEHYDE

UN Number: 3082

Also known as: ALDEHYDE ISODECALIQUE, 2,6-DIMETHYL OCTANAL, 2,6-DIMETHYL OCTANOIC ALDEHYDE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 3082

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	840 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	156.28
Density of gas (kg/m ³)	5.65
Vapour Pressure (Pa)	29 [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Colour	colourless
Odour	fruit odour

Transportation data

State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

Ecotoxicity

ISODECANOL

CAS Number: 25339-17-7

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 25339-17-7

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	841 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	158.29
Boiling Point (°C)	220
Vapour Pressure (Pa)	400 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	266
Flash Point (°C)	104
Lower explosivity limit (LEL) (volume %)	0.8
Upper explosivity limit (UEL) (volume %)	4.5

Behaviour at sea

Persistence (days) 0.8

Additional data

Colour	colourless
Odour	mild alcohol odour
Standard behavior classification	E, FE, F

Transportation data

Cargo group	20
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	alcohols, glycols

Reactivity data

Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	3 - ≥ 3 and < 4
Bioaccumulation in BCF (A1B)	2 - ≥ 10 and < 100
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	Fp - Persistent slick forming substance
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

ISODECANOL inhibited

Also known as: ACRYLATE D'ISODECYLE stabilisé, ACRYLIC ACID, ISODECYL ESTER

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	885 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	212.4
Density of gas (kg/m ³)	9.42

Behaviour at sea

Persistence (days)	0.8
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Additional data

Colour	colourless
Odour	weak odour
Standard behavior classification	D, FD, F

Transportation data

State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient

Reactivity data

Water	No
Acid(s)	No
Base(s)	No
Metal(s) and alloys	No
Oxidizing agents	No
Reducing agents	No
Combustibles	No

GESAMP Hazard profile

Human toxicity threshold

Ecotoxicity

ISOPENTANE

UN Number: 1265

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1265

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	620 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	72.15
Density of gas (kg/m ³)	3.225
Boiling Point (°C)	28.1
Melting Point (°C)	-160
Vapour Pressure (Pa)	99000 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	420
Flash Point (°C)	-20
Lower explosivity limit (LEL) (volume %)	1.4
Upper explosivity limit (UEL) (volume %)	7.6

Behaviour at sea

Additional data

Colour	colourless
Odour	gasoline odour

Transportation data

Transport mode	Bulk, Packaged
Package group	I/II
Cargo group	31
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	paraffins

IMO class	3.1
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Reactivity data

Water	No
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GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m3)	610 ppm
TEEL-2 (mg/m3)	610 ppm
TEEL-3 (mg/m3)	20000 ppm

Ecotoxicity

ISOPHORONE

CAS Number: 78-79-5

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 78-79-5

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	921 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	138.2
Density of gas (kg/m ³)	6.153
Boiling Point (°C)	215
Melting Point (°C)	-8
Vapour Pressure (Pa)	40 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	460
Flash Point (°C)	96
Lower explosivity limit (LEL) (volume %)	0.84
Upper explosivity limit (UEL) (volume %)	3.8

Behaviour at sea

Persistence (days) 1.6

Additional data

Colour	colourless
Odour	camphor odour
Standard behavior classification	FD

Transportation data

Cargo group	18
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	ketones

Reactivity data

Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation in BCF (A1B)	1 - ≥ 1 and < 10
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	FD - Floater/Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

IDHL	800
TEEL-1 (mg/m3)	0.71 ppm
TEEL-2 (mg/m3)	0.71 ppm
TEEL-3 (mg/m3)	200 ppm

Ecotoxicity

ISOPHORONE DIAMINE

UN Number: 2289 - CAS Number: 2855-13-2

Also known as: 3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2289
CAS number	2855-13-2

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	924 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	170.3
Boiling Point (°C)	247
Melting Point (°C)	10
Vapour Pressure (Pa)	20.7 [Pa] at a temperature of 20°C
Flash Point (°C)	110
Lower explosivity limit (LEL) (volume %)	1.2

Behaviour at sea

Additional data

Colour	colourless
Odour	faint amine

Transportation data

Transport mode	Bulk, Packaged
Package group	III
State	liquid
Temperature (°C)	ambient
Family name	aliphatic amines

Reactivity data

Water	No
Acid(s)	Yes
Metal(s) and alloys	Yes
Oxidizing agents	Yes
Combustibles	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Skin irritation/corrosivity (D1)	3 - Corrosive
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Specific Health Concern (D3)	Ss - Skin Sensitization
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

Ecotoxicity

ISOPHORONE DIISOCYANATE

UN Number: 2290 - CAS Number: 4098-71-9

Also known as: DIISOCYANATE D'ISOPHORONE

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number	2290
CAS number	4098-71-9

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1060 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	222.32
Density of gas (kg/m ³)	9.93
Boiling Point (°C)	decomp at 310
Melting Point (°C)	-60
Vapour Pressure (Pa)	40 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	430
Flash Point (°C)	163
Lower explosivity limit (LEL) (volume %)	0.7
Upper explosivity limit (UEL) (volume %)	4.5

Behaviour at sea

Additional data

Colour	colourless or yellowish
Odour	odourless

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	12
Family name	isocyanates

IMO class	6.1
Reactivity data	
Water	Yes
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	Yes (Al, Cu)
Oxidizing agents	Yes
Combustibles	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Skin irritation/corrosivity (D1)	3 - Corrosive
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TLV-TWA	0.005
TEEL-1 (mg/m3)	0.02 ppm
TEEL-2 (mg/m3)	0.135 ppm
TEEL-3 (mg/m3)	6 ppm

Ecotoxicity

ISOPRENE inhibited

UN Number: 1218

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1218

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	681 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	68.12
Density of gas (kg/m ³)	3.032
Boiling Point (°C)	34.3
Melting Point (°C)	-146
Vapour Pressure (Pa)	53320 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	220
Flash Point (°C)	-20

Behaviour at sea

Additional data

Colour	colourless
Odour	mild odour

Transportation data

Transport mode	Bulk,Gas,Packaged
Ship type	2G,2PG
Cargo group	30
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	under pressure
Family name	olefins
IMO class	3.1

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	No
Metal(s) and alloys	No
Static electricity	Yes
Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

ERPG-2 (ppm)	1000
ERPG-3 (ppm)	4000

Ecotoxicity

ISOPROPANOL

UN Number: 1219 - CAS Number: 67-63-0

Also known as: DIMETHYL CARBINOL, Dimethylcarbinol, 2-Hydroxypropane, Ipa, Isopropanol, Isopropyl Alcohol, Propan-2-ol, Sec-Propyl Alcohol, 2-Propyl Alcohol, Propanol, Propyl Alcohol, 2-Propanol

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1219
CAS number	67-63-0
Formula	C ₃ H ₈ O

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	785 [Kg/m ³] at a temperature of 20°C 787.5 [Kg/m ³] at a temperature of 5°C 794.6 [Kg/m ³] at a temperature of 10°C 794.6 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	3.05 [cSt] at a temperature of 20°C 2.59 [cSt] at a temperature of 25°C 5.6381 [cSt] at a temperature of 5°C 4.5683 [cSt] at a temperature of 10°C 4.4173 [cSt] at a temperature of 20°C
Molar mass (g/mol)	60.1
Density of gas (kg/m ³)	2.67
Solubility (g/L)	790000 [g/L] at a temperature of 20°C and salinity of 0‰ 790000 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	82.5
Melting Point (°C)	-88
Critical molar volume (m ³ /mol)	0.000222
Critical temperature (°C)	508.3
Critical pressure (Pa)	4764000

Surface tension (mN/m)	21.32 [mN/m] at a temperature of 20°C
	20.93 [mN/m] at a temperature of 25°C
	21.44 [mN/m] at a temperature of 6.9°C
	21.0 [mN/m] at a temperature of 12.5°C
	20.79 [mN/m] at a temperature of 20.2°C
Vapour Pressure (Pa)	27593 [Pa] at a temperature of 20°C
	6060 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	395
Flash Point (°C)	12
Flash Point (Pensky-Martens closed cup) (°C)	12
Flash Point (Cleveland open cup) (°C)	14
Lower explosivity limit (LEL) (volume %)	2.3
Upper explosivity limit (UEL) (volume %)	12.7
Vapor enthalpy (J/Kg)	663172 [J/Kg] at a temperature of 82.3°C
	755367 [J/Kg] at a temperature of 25°C
Combust enthalpy (J/Kg)	30500000
Specific heat capacity (J/(Kg·K))	2604.4
Combustion efficiency (%)	98
Mass flow rate of the combustion surface (Kg/(m²·s))	0.05
Rad fraction (%)	22
Henry's constant (mol/(m³·Pa))	1.06

Behaviour at sea

Log kow	0.05
Log koc	1.5
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Biodegradation in marine environment (Half-life) (days)	10
Bioconcentration factor (BCF)	1

Additional data

Colour	colourless
Odour	unpleasant alcohol odour
MARPOL pollution category	Category Description
	Z Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment.
Standard behavior classification	DE

Transportation data

Package group	II
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
IMO class	3.2

Reactivity data

Abilities	Miscible in water.
Static electricity	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - $e < 1$, or $> ca.7$, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold



IDHL	20000	
Hazard statements	Physical	
	H225	Highly flammable liquid and vapour.
	Health	
	H319	Causes serious eye irritation.
	H336	May cause drowsiness or dizziness.

Precautionary statements**Prevention**

- P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
- P233 Keep container tightly closed.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting/.../equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
- P264 Wash ... thoroughly after handling.
- P271 Use only outdoors or in a well-ventilated area.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response

- P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P312 Call a POISON CENTER or doctor/physician if you feel unwell.
- P337 + P313 If eye irritation persists: Get medical advice/attention.
- P370 + P378 In case of fire: Use ... for extinction.

Storage

- P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
- P403 + P235 Store in a well-ventilated place. Keep cool.
- P405 Store locked up.

Disposal

- P501 Dispose of contents/container to ...

TLV-TWA	400
TEEL-1 (mg/m3)	400 ppm
TEEL-2 (mg/m3)	400 ppm
TEEL-3 (mg/m3)	2000 ppm

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	1800
Lowest median lethal concentration (LC50) on crustacean (mg/l)	1400
Lowest median lethal concentration (LC50) on fishes (mg/l)	9640
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	30
Assessment factor (AF)	1000 on the short term 1000 on the long term
Predicted No Effect Concentration (PNEC) (µg/l)	1400 [µg/l] on the short term 30 [µg/l] on the long term

ISOPROPANOLAMINE

CAS Number: 78-96-6

Also known as: 1-AMINOPROPANOL-2

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 78-96-6

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	970 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	75.1
Density of gas (kg/m ³)	3.35
Boiling Point (°C)	159
Vapour Pressure (Pa)	190 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	335
Flash Point (°C)	71
Lower explosivity limit (LEL) (volume %)	2.2
Upper explosivity limit (UEL) (volume %)	12

Behaviour at sea

Additional data

Colour	colourless
Odour	characteristic

Transportation data

Family name alkanolamines

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes

Organic substance	Yes
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GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	3 - Corrosive
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

Ecotoxicity

ISOPROPYL ACETATE

UN Number: 1220 - CAS Number: 108-21-4

Also known as: ACETATE D'ISOPROPYLE, ACETIC ACID, ISOPROPYL ESTER

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1220
CAS number	108-21-4

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	874 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	102.13
Density of gas (kg/m ³)	3.52
Boiling Point (°C)	88.7
Melting Point (°C)	-73
Vapour Pressure (Pa)	6483 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	460
Lower explosivity limit (LEL) (volume %)	1.8

Behaviour at sea

Additional data

Colour	colourless
Odour	pleasant, fruit odour
Standard behavior classification	D, ED, E

Transportation data

Package group	II
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
IMO class	3.2

Reactivity data

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	ED - Evaporator/Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

IDHL	16000
TLV-TWA	250
TEEL-1 (mg/m3)	200 ppm
TEEL-2 (mg/m3)	200 ppm
TEEL-3 (mg/m3)	1800 ppm

Ecotoxicity

ISOPROPYL CYCLOHEXANE

CAS Number: 696-29-7

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 696-29-7

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	802 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	126.24
Density of gas (kg/m ³)	5.61
Boiling Point (°C)	154.5
Melting Point (°C)	-89.4
Ignition Temperature (°C)	283
Flash Point (°C)	36

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless

Transportation data

Cargo group	31
State	liquid
Temperature (°C)	ambient
Family name	paraffins

Reactivity data

Water No

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	4 - ≥4 and <5
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Bioaccumulation (A1)	4 - High potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	0 - Not irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	FE - Floater/Evaporator
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

ISOPROPYLAMINE

UN Number: 1221 - CAS Number: 75-31-0

Also known as: 2-AMINOPROPANE

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number	1221
CAS number	75-31-0

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	691 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	59.11
Density of gas (kg/m ³)	2.63
Boiling Point (°C)	32.4
Melting Point (°C)	-95
Vapour Pressure (Pa)	66580 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	402
Flash Point (°C)	-26
Lower explosivity limit (LEL) (volume %)	2.3
Upper explosivity limit (UEL) (volume %)	12

Behaviour at sea

Additional data

Colour	colourless
Odour	strong ammonia
Standard behavior classification	DE

Transportation data

Transport mode	Bulk, Packaged
State	liquid
Temperature (°C)	ambient

Family name	aliphatic amines
IMO class	3.1

Reactivity data

Water	No
Acid(s)	Yes
Metal(s) and alloys	Yes
Oxidizing agents	Yes
Combustibles	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	3 - Corrosive
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	DE - Dissolver/Evaporator
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

IDHL	750
TEEL-1 (mg/m3)	10 ppm
TEEL-2 (mg/m3)	150 ppm
TEEL-3 (mg/m3)	750 ppm

Ecotoxicity

ISOPROPYLAMINE

UN Number: 1221

Also known as: 2-AMINOPROPANE

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number 1221

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	691 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	59.11
Density of gas (kg/m ³)	2.58
Boiling Point (°C)	32.6
Melting Point (°C)	-95
Vapour Pressure (Pa)	61300 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	402
Flash Point (°C)	-37
Lower explosivity limit (LEL) (volume %)	2.3
Upper explosivity limit (UEL) (volume %)	12

Behaviour at sea

Additional data

Colour	colourless
Odour	strong ammonia odour
Standard behavior classification	DE

Transportation data

Transport mode	Bulk,Gas,Packaged
Ship type	2G,2PG
State	liquid
Temperature (°C)	ambient

Pressure (Pa)	ambient
IMO class	3.1

Reactivity data

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	3 - Corrosive
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	DE - Dissolver/Evaporator
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

IDHL	4000
TEEL-1 (mg/m3)	10 ppm
TEEL-2 (mg/m3)	150 ppm
TEEL-3 (mg/m3)	750 ppm

Ecotoxicity

ISOPROPYLBENZENE

UN Number: 1918 - CAS Number: 98-82-8

Also known as: CUMENE, CUMOL, 2-Phenylpropane, Isopropylbenzene

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1918
CAS number	98-82-8
Formula	C ₉ H ₁₂

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	866 [Kg/m ³] at a temperature of 20°C 864 [Kg/m ³] at a temperature of 25°C
Kinematic viscosity (cSt)	0.853 [cSt] at a temperature of 25°C
Molar mass (g/mol)	120.19
Density of gas (kg/m ³)	5.354
Solubility (g/L)	50 [g/L] at a temperature of 20°C and salinity of 0‰ 61.3 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	152
Melting Point (°C)	-96
Critical temperature (°C)	631
Critical pressure (Pa)	3209000
Surface tension (mN/m)	27.69 [mN/m] at a temperature of 25°C
Vapour Pressure (Pa)	5333 [Pa] at a temperature of 20°C 600 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	420
Flash Point (°C)	31
Flash Point (Pensky-Martens closed cup) (°C)	39
Lower explosivity limit (LEL) (volume %)	0.9
Upper explosivity limit (UEL) (volume %)	6.5
Vapor enthalpy (J/Kg)	375485 [J/Kg] at a temperature of 25°C
Specific heat capacity (J/(Kg·K))	1753

Henry's constant (mol/(m ³ ·Pa))	1165
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Behaviour at sea

Log kow	3.66
Log koc	2.84
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Biodegradation in marine environment (Half-life) (days)	Not biodegradable
Bioconcentration factor (BCF)	35.5

Additional data

Colour	colourless
Odour	gasoline odour

MARPOL pollution category	Category	Description
	Other Substances	Substances which have been evaluated and found to fall outside Category X, Y or Z because they are considered to present no harm to marine resources, human health, amenities or other legitimate uses of the sea when discharged into the sea from tank cleaning of deballasting operations. The discharge of bilge or ballast water or other residues or mixtures containing these substances are not subject to any requirements of MARPOL Annex II.

Transportation data

Package group	III
Cargo group	32
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	aromatic hydrocarbons
IMO class	3.3

Reactivity data

Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	3 - ≥3 and <4
Bioaccumulation in BCF (A1B)	2 - ≥10 and <100
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable

Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	FE - Floater/Evaporator
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold



IDHL	8000
Hazard statements	Physical
	H226 Flammable liquid and vapour.
	Health
	H304 May be fatal if swallowed and enters airways.
	H335 May cause respiratory irritation.
	Environmental
H411 Toxic to aquatic life with long lasting effects.	
Precautionary statements	Prevention
	P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
	P280 Wear protective gloves/protective clothing/eye protection/face protection.
	Response
	P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
	P333 If skin irritation or rash occurs:
TLV-TWA	50
TEEL-1 (mg/m3)	50 ppm
TEEL-2 (mg/m3)	300 ppm
TEEL-3 (mg/m3)	730 ppm

Ecotoxicity

Lowest median lethal concentration (LC50) on crustacean (mg/l)	7.4
Lowest median lethal concentration (LC50) on fishes (mg/l)	2.7
Highest no observed effect concentration (NOEC) on algae (mg/l)	0.73

Highest no observed effect concentration (NOEC) on crustacean (mg/l)	0.00068
Highest no observed effect concentration (NOEC) on fishes (mg/l)	0.0019
Predicted No Effect Concentration (PNEC) (µg/l)	22 [µg/l] on the long term

KEROSENE

UN Number: 1223

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1223

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	800 [Kg/m ³] at a temperature of 20°C
Density of gas (kg/m ³)	5.81
Boiling Point (°C)	200
Melting Point (°C)	-20
Vapour Pressure (Pa)	271 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	220
Flash Point (°C)	30
Lower explosivity limit (LEL) (volume %)	0.7

Behaviour at sea

Additional data

Colour	colourless
Odour	gasoline odour

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	33
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	miscell. hydroc. mixt
IMO class	3.3

Reactivity data

Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Human toxicity threshold

TLV-TWA	200
TEEL-1 (mg/m3)	290
TEEL-2 (mg/m3)	1100
TEEL-3 (mg/m3)	1100

Ecotoxicity

LACTIC ACID

CAS Number: 50-21-5

Also known as: ACIDE LACTIQUE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 50-21-5

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1200 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	90

Behaviour at sea

Additional data

Colour	colourless to yellow
Odour	weak unpleasant odour

Transportation data

State	syropy liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient

Reactivity data

Water	No
Acid(s)	No
Base(s)	No
Metal(s) and alloys	Yes
Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TEEL-1 (mg/m3)	40
TEEL-2 (mg/m3)	300
TEEL-3 (mg/m3)	500

Ecotoxicity

LATEX liquid synthetic

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1057 [Kg/m ³] at a temperature of 20°C

Behaviour at sea

Persistence (days)	1.9
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Additional data

Colour	white
Odour	characteristic odour

Transportation data

Cargo group	43
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	miscell. water solut.

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	No
Metal(s) and alloys	No
Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	Yes

GESAMP Hazard profile

Human toxicity threshold

Ecotoxicity

Lauric Acid

CAS Number: 143-07-7

Also known as: Dodecanoic Acid, Dodecylic Acid, Vulvic Acid, Laurostearic Acid, Lauric Acid, Acide Laurique

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number	143-07-7
Formula	C ₁₂ H ₂₄ O ₂

Physical chemical data

Physical State (25°C)	Solid
Kinematic viscosity (cSt)	8.41 [cSt] at a temperature of 50°C
Molar mass (g/mol)	200.318
Solubility (g/L)	4.81 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	225
Melting Point (°C)	43.8
Critical temperature (°C)	743
Critical pressure (Pa)	1930000
Surface tension (mN/m)	26.6 [mN/m] at a temperature of 70°C
Combustion enthalpy (J/Kg)	37009655
Henry's constant (mol/(m ³ ·Pa))	0.94

Behaviour at sea

Log K _{ow}	4.2
Log K _{oc}	2.5
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Bioconcentration factor (BCF)	255

Additional data

MARPOL pollution category

Category	Description
X	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a major hazard to either marine resources or human health and, therefore, justify the prohibition of the discharge into the marine environment.

Transportation data

Reactivity data

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	4 - ≥ 4 and < 5
Bioaccumulation (A1)	4 - High potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	1 - Low
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	Fp - Persistent slick forming substance
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold



Hazard statements	Health
	H318 Causes serious eye damage.
Precautionary statements	Prevention
	P280 Wear protective gloves/protective clothing/eye protection/face protection.

Ecotoxicity

Lowest median lethal concentration (LC50) on fishes (mg/l)	35
Highest no observed effect concentration (NOEC) on algae (mg/l)	4.4
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	1.5
Highest no observed effect concentration (NOEC) on fishes (mg/l)	6.4

LEAD ACETATE

UN Number: 1616

Also known as: ACETATE DE PLOMB, DIBASIC LEAD ACETATE

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number 1616

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	2600 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	379.3
Density of gas (kg/m ³)	2600
Boiling Point (°C)	200
Melting Point (°C)	75

Behaviour at sea

Additional data

Colour	white
Odour	odourless
Standard behavior classification	SD

Transportation data

Package group	III
State	solid
Temperature (°C)	ambient
Pressure (Pa)	ambient
IMO class	6.1

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

TLV-TWA	0.02 (Pb)
TEEL-1 (mg/m3)	0.235
TEEL-2 (mg/m3)	75
TEEL-3 (mg/m3)	157

Ecotoxicity

LEAD ARSENATE

UN Number: 1617

Also known as: ARSENIATES DE PLOMB

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1617

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	7800 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	347.12
Density of gas (kg/m ³)	7800
Melting Point (°C)	280

Behaviour at sea

Additional data

Colour	white
Odour	odourless
Standard behavior classification	D, SD, S

Transportation data

Package group	II
State	solid
Temperature (°C)	ambient
Pressure (Pa)	ambient
IMO class	6.1

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

TLV-TWA	0.01 (Pb)
TEEL-1 (mg/m3)	0.012
TEEL-2 (mg/m3)	0.012
TEEL-3 (mg/m3)	30

Ecotoxicity

LEAD NITRATE

UN Number: 1469

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1469

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	4500 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	331.2
Melting Point (°C)	470

Behaviour at sea

Additional data

Colour	white
Odour	odourless
Standard behavior classification	SD

Transportation data

Package group	II
State	solid
Temperature (°C)	ambient
Pressure (Pa)	ambient
IMO class	5.1

Reactivity data

Water	No
Acid(s)	No
Base(s)	No
Metal(s) and alloys	No
Oxidizing agents	No
Reducing agents	No

Combustibles	No
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

TLV-TWA	0.02 (Pb)
TEEL-1 (mg/m3)	0.6
TEEL-3 (mg/m3)	160

Ecotoxicity

LINDANE

UN Number: 2761

Also known as: AFICIDE, gamma-BENZENE HEXACHLORIDE, BENZENE HEXACHLORIDE

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number 2761

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m³)	1900 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	290.85
Boiling Point (°C)	323
Melting Point (°C)	112.5/113.5
Vapour Pressure (Pa)	1.2 [Pa] at a temperature of 20°C
Flash Point (°C)	999

Behaviour at sea

Additional data

Marine pollutant P

Transportation data

Package group	I/II/III
State	solid
IMO class	6.1

Reactivity data

Base(s)	Yes
Metal(s) and alloys	Yes (Al)

GESAMP Hazard profile

Human toxicity threshold

IDHL	80
TEEL-1 (mg/m3)	1.5
TEEL-2 (mg/m3)	50
TEEL-3 (mg/m3)	50

Ecotoxicity

MAGNESIUM HYDROXIDE slurry

CAS Number: 1309-42-8

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 1309-42-8

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	2400 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	58.3
Melting Point (°C)	350

Behaviour at sea

Additional data

Colour	white
Odour	odourless

Transportation data

Reactivity data

Water	No
Acid(s)	Yes
Combustibles	Yes

GESAMP Hazard profile

Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	0 - Not irritating

Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly
Effects on wildlife and bottom habitats (E3)	1 - Is a floater; and/or is slightly acutely toxic; and/or is mildly irritant to skin and/or eyes

Human toxicity threshold

Ecotoxicity

MAGNESIUM PHOSPHIDE

UN Number: 2011

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 2011

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	2060 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	134.86
Boiling Point (°C)	1000, decomp.
Melting Point (°C)	>750

Behaviour at sea

Additional data

Transportation data

State	solid
IMO class	4.3

Reactivity data

Water Yes

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m ³)	0.6 ppm
TEEL-2 (mg/m ³)	1 ppm
TEEL-3 (mg/m ³)	1.8 ppm

Ecotoxicity

MALATHION

UN Number: 3082

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 3082

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1234 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	330.36
Flash Point (°C)	163

Behaviour at sea

Additional data

Colour	yellow to dark brown
Odour	skunk odour

Transportation data

Transport mode	Bulk, Packaged
Package group	III
State	liquid
Temperature (°C)	< 49

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

IDHL	350
TLV-TWA	0.7
TEEL-1 (mg/m ³)	15
TEEL-2 (mg/m ³)	15

Ecotoxicity

MALEIC ANHYDRIDE molten

UN Number: 2215 - CAS Number: 108-31-6

Also known as: ANHYDRIDE MALEIQUE fondu, cis-BUTENEDIOIC ANHYDRIDE, Butenedioic Anhydride, 2,5-Furandione, Toxilic Anhydride, Maleic Anhydride

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2215
CAS number	108-31-6
Formula	C ₄ H ₂ O ₃

Physical chemical data

Physical State (20°C)	Solid
Physical State (25°C)	Solid
Density (kg/m ³)	134 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	98.06
Density of gas (kg/m ³)	4.36
Solubility (g/L)	4912 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	200
Melting Point (°C)	53
Critical temperature (°C)	721
Critical pressure (Pa)	7280000
Ignition Temperature (°C)	475
Flash Point (°C)	103
Flash Point (Pensky-Martens closed cup) (°C)	102
Flash Point (Cleveland open cup) (°C)	110
Lower explosivity limit (LEL) (volume %)	1.4
Upper explosivity limit (UEL) (volume %)	7.1
Henry's constant (mol/(m ³ ·Pa))	0.398

Behaviour at sea

Persistence (days)	1.6
Log kow	1.62
Log koc	0

Biodegradation in estuary environment (Half-life) (days)	0.00208
Bioconcentration factor (BCF)	5

Additional data

Colour	colourless				
Odour	choking odour				
MARPOL pollution category	<table border="1"> <thead> <tr> <th>Category</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Y</td> <td>Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.</td> </tr> </tbody> </table>	Category	Description	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.
Category	Description				
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Standard behavior classification	D, FD, F				

Transportation data

Transport mode	Bulk,Packaged
Package group	III
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient

Reactivity data

Water	Yes
Acid(s)	No
Base(s)	No
Metal(s) and alloys	No
Static electricity	Yes
Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate

Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



Hazard statements	Health	
	H302	Harmful if swallowed.
	H314	Causes severe skin burns and eye damage.
	H317	May cause an allergic skin reaction.
	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Precautionary statements	Prevention	
	P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
	P280	Wear protective gloves/protective clothing/eye protection/face protection.
	P284	Wear respiratory protection.
	Response	
	P303 + P361 + P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
	P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P342 + P311	If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.	
TLV-TWA	0.25	
ERPG-1 (ppm)	0.2	
ERPG-3 (ppm)	20	

Ecotoxicity

Lowest median lethal concentration (LC50) on fishes (mg/l)	230
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	17.5
Highest no observed effect concentration (NOEC) on fishes (mg/l)	150
Assessment factor (AF)	1000 on the short term
Predicted No Effect Concentration (PNEC) (µg/l)	10 [µg/l] on the short term

Marine Diesel Oil

CAS Number: 68476-34-6

Also known as: Mdo, Marine Diesel Oil, Diesel Marine Leger

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 68476-34-6

Physical chemical data

Physical State (25°C)	Liquid
Mixed	Yes
Solubility (g/L)	0 [g/L] at a temperature of 20°C and salinity of 0‰
Boiling Point (°C)	150
Lower explosivity limit (LEL) (volume %)	0.7
Upper explosivity limit (UEL) (volume %)	5

Behaviour at sea

Additional data

MARPOL pollution category

Category	Description
Other Substances	Substances which have been evaluated and found to fall outside Category X, Y or Z because they are considered to present no harm to marine resources, human health, amenities or other legitimate uses of the sea when discharged into the sea from tank cleaning of deballasting operations. The discharge of bilge or ballast water or other residues or mixtures containing these substances are not subject to any requirements of MARPOL Annex II.

Transportation data

Reactivity data

GESAMP Hazard profile

Interference with coastal amenities (E2)

G - Gas

Human toxicity threshold

Ecotoxicity

MERCURIC AMMONIUM CHLORIDE

UN Number: 1636

Also known as: CIANURRINA, CYANURE DE MERCURE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1636

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	3996 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	252.63

Behaviour at sea

Persistence (days) 3.1

Additional data

Colour	white
Odour	odourless
Marine pollutant	P

Transportation data

Package group	II
State	solid
Temperature (°C)	ambient
Pressure (Pa)	ambient
IMO class	6.1

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	No
Metal(s) and alloys	No

Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

TLV-TWA	0.006 (Pb)
TEEL-1 (mg/m3)	1.5
TEEL-2 (mg/m3)	12.6
TEEL-3 (mg/m3)	12.6

Ecotoxicity

MERCURIC AMMONIUM CHLORIDE

UN Number: 1630

Also known as: AMINO MERCURIC CHLORIDE, AMMONIATED MERCURIC CHLORIDE, AMMONIATED MERCURY, CHLORURE DE MERCURE AMMONIACAL

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1630

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m³)	5700 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	252.1

Behaviour at sea

Persistence (days) 2.7

Additional data

Colour	white
Odour	odourless
Marine pollutant	P
Standard behavior classification	D, SD, S

Transportation data

Package group	II
State	solid
Temperature (°C)	ambient
Pressure (Pa)	ambient
IMO class	6.1

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

TLV-TWA

0.012 (Pb)

Ecotoxicity

MERCURIC CHLORIDE

UN Number: 1624

Also known as: CHLORURE MERCURIQUE, CORROSIVE SUBLIMATE

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number 1624

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	5400 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	271.5
Boiling Point (°C)	302
Melting Point (°C)	276
Vapour Pressure (Pa)	0.1 [Pa] at a temperature of 20°C

Behaviour at sea

Persistence (days) 3.1

Additional data

Colour	white
Odour	odourless
Marine pollutant	P

Transportation data

Package group	II
State	solid
Temperature (°C)	ambient
Pressure (Pa)	ambient
IMO class	6.1

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

TLV-TWA	0.005 (Pb)
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TEEL-2 (mg/m3)	13.5
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TEEL-3 (mg/m3)	13.5
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Ecotoxicity

MERCURIC NITRATE

UN Number: 1625

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1625

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	4390 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	342.6
Melting Point (°C)	79

Behaviour at sea

Persistence (days) 1.6

Additional data

Colour	white
Odour	sharp odour
Marine pollutant	P
Standard behavior classification	SD

Transportation data

Package group	II
State	solid
Temperature (°C)	ambient
Pressure (Pa)	ambient
IMO class	6.1

Reactivity data

Water	Yes
Acid(s)	No
Base(s)	No
Metal(s) and alloys	Yes

Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

TLV-TWA	0.006 (Pb)
TEEL-1 (mg/m3)	0.0405
TEEL-2 (mg/m3)	0.162
TEEL-3 (mg/m3)	16.2

Ecotoxicity

MERCUROUS CHLORIDE solid

UN Number: 3077

Also known as: CHLORURE DE MERCURE (I) solide

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 3077

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	7150 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	236.1

Behaviour at sea

Additional data

Colour	white
Odour	odourless
Marine pollutant	P
Standard behavior classification	D, SD, S

Transportation data

State	solid
Temperature (°C)	ambient
Pressure (Pa)	ambient

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

TLV-TWA 0.006 (Pb)

TEEL-1 (mg/m3)	0.0883
TEEL-2 (mg/m3)	1.18
TEEL-3 (mg/m3)	11.8

Ecotoxicity

MERCUROUS NITRATE

UN Number: 1627

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1627

Physical chemical data

Physical State (20°C) Solid

Molar mass (g/mol) 280.6

Behaviour at sea

Additional data

Colour white

Odour weak odour

Marine pollutant P

Standard behavior classification D, SD, FD

Transportation data

Package group II

State solid

Temperature (°C) ambient

Pressure (Pa) ambient

IMO class 6.1

Reactivity data

Water Yes

Acid(s) No

Base(s) No

Metal(s) and alloys Yes

Oxidizing agents No

Reducing agents No

Combustibles No

GESAMP Hazard profile

Human toxicity threshold

TLV-TWA	0.006 (Pb)
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TEEL-1 (mg/m3)	0.0327
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TEEL-2 (mg/m3)	0.131
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TEEL-3 (mg/m3)	13.1
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Ecotoxicity

MERCURY ACETATE

UN Number: 1629

Also known as: ACETATE DE MERCURE, DIACETOXYMERCURY

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1629

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	3270 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	318.7
Melting Point (°C)	178

Behaviour at sea

Persistence (days) 2.7

Additional data

Colour	white
Odour	mild vinegar odour
Marine pollutant	P
Standard behavior classification	SD

Transportation data

Package group	II
State	solid
Temperature (°C)	ambient
Pressure (Pa)	ambient
IMO class	6.1

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

TLV-TWA	0.005 (Pb)
TEEL-1 (mg/m3)	0.159
TEEL-2 (mg/m3)	0.159
TEEL-3 (mg/m3)	15.9

Ecotoxicity

MERCURY IODIDE

UN Number: 1638

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1638

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	6300 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	454.9
Boiling Point (°C)	354
Vapour Pressure (Pa)	20881 [Pa] at a temperature of 20°C

Behaviour at sea

Persistence (days) 1.9

Additional data

Colour	red
Odour	odourless

Transportation data

Transport mode	Bulk, Packaged
State	solid
Temperature (°C)	ambient
Pressure (Pa)	ambient
IMO class	6.1

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

TLV-TWA 0.005 (Pb)

TEEL-1 (mg/m3)	0.17
TEEL-2 (mg/m3)	0.227
TEEL-3 (mg/m3)	22.7

Ecotoxicity

MERCURY OXIDE

UN Number: 1641

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1641

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	11100 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	216.61
Melting Point (°C)	500

Behaviour at sea

Persistence (days) 3.1

Additional data

Colour	red, orange, yellow
Odour	odourless
Marine pollutant	P

Transportation data

Package group	II
State	solid
Temperature (°C)	ambient
Pressure (Pa)	ambient
IMO class	6.1

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

TLV-TWA 0.005 (Pb)

TEEL-1 (mg/m3)	0.026
TEEL-2 (mg/m3)	0.104
TEEL-3 (mg/m3)	10.4

Ecotoxicity

MESITYL OXIDE

UN Number: 1229 - CAS Number: 141-79-7

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1229
CAS number	141-79-7

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	853 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	98.2
Density of gas (kg/m ³)	4.386
Boiling Point (°C)	130
Melting Point (°C)	-59
Vapour Pressure (Pa)	1000 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	340
Flash Point (°C)	31
Lower explosivity limit (LEL) (volume %)	1.3
Upper explosivity limit (UEL) (volume %)	8.8

Behaviour at sea

Additional data

Colour	colourless to light yellow
Odour	strong peppermint, honey
Standard behavior classification	FED

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	18
State	liquid
Temperature (°C)	ambient

Pressure (Pa)	ambient
Family name	ketones
IMO class	3.3

Reactivity data

Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

IDHL	5000
TLV-TWA	15
TEEL-1 (mg/m ³)	25 ppm
TEEL-2 (mg/m ³)	25ppm
TEEL-3 (mg/m ³)	1400 ppm

Ecotoxicity

METALAXYL

Also known as: APRON

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	1210 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	279.34
Melting Point (°C)	71.8/72.3
Vapour Pressure (Pa)	2.9*10 ⁻⁴ [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Transportation data

State solid

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

Ecotoxicity

METHACRYLIC ACID inhibited

UN Number: 2531 - CAS Number: 79-41-4

Also known as: ACIDE METHACRYLIQUE stabilisé, 2-Methacrylic Acid, 2-Methyl-2-Propenoic Acid, Methacrylic Acid, Acide Methacrylique

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2531
CAS number	79-41-4
Formula	C ₄ H ₆ O ₂

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Solid
Density (kg/m ³)	1010 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	1.28 [cSt] at a temperature of 20°C
Molar mass (g/mol)	86.1
Density of gas (kg/m ³)	3.87
Solubility (g/L)	89000 [g/L] at a temperature of 20°C and salinity of 0‰ 89000 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	161
Melting Point (°C)	15
Surface tension (mN/m)	65.9 [mN/m] at a temperature of 20°C
Vapour Pressure (Pa)	90 [Pa] at a temperature of 20°C 133 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	400
Flash Point (°C)	77
Flash Point (Cleveland open cup) (°C)	77
Lower explosivity limit (LEL) (volume %)	2.4
Upper explosivity limit (UEL) (volume %)	8.8
Specific heat capacity (J/(Kg·K))	1871
Henry's constant (mol/(m ³ ·Pa))	0.039

Behaviour at sea

Log kow	0.93
Log koc	0.35
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Bioconcentration factor (BCF)	3.1

Additional data

Colour	colourless				
Odour	sharp, acrid, repulsive				
MARPOL pollution category	<table border="1"> <thead> <tr> <th>Category</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Y</td> <td>Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.</td> </tr> </tbody> </table>	Category	Description	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.
Category	Description				
Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.				

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Temperature (°C)	ambient
Family name	organic acids

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury

Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



Hazard statements	Health
	H302 Harmful if swallowed.
	H311 Toxic in contact with skin.
	H314 Causes severe skin burns and eye damage.
	H332 Harmful if inhaled.
Precautionary statements	Health
	H335 May cause respiratory irritation.
	Prevention
	P280 Wear protective gloves/protective clothing/eye protection/face protection.
	Response
	P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
	P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	Storage
	P405 Store locked up.
	Disposal
P501 Dispose of contents/container to ...	
TLV-TWA	20
TEEL-1 (mg/m3)	6.7 ppm
TEEL-2 (mg/m3)	61 ppm
TEEL-3 (mg/m3)	220 ppm

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	45
Lowest median lethal concentration (LC50) on crustacean (mg/l)	140
Lowest median lethal concentration (LC50) on fishes (mg/l)	85
Highest no observed effect concentration (NOEC) on algae (mg/l)	8.2
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	53
Highest no observed effect concentration (NOEC) on fishes (mg/l)	10
Assessment factor (AF)	50 on the short term
Predicted No Effect Concentration (PNEC) (µg/l)	164 [µg/l] on the short term

METHACRYLONITRILE inhibited

UN Number: 3079 - CAS Number: 126-98-7

Also known as: 2-CYANOPROPENE-1

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	3079
CAS number	126-98-7

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	800 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	67.09
Density of gas (kg/m ³)	2.98
Boiling Point (°C)	90/92
Melting Point (°C)	-35.8
Vapour Pressure (Pa)	8536 [Pa] at a temperature of 20°C
Flash Point (°C)	12
Upper explosivity limit (UEL) (volume %)	6.8

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless
Standard behavior classification	ED

Transportation data

Transport mode	Bulk, Packaged
Cargo group	15
State	liquid
Temperature (°C)	ambient
Family name	substituted allyls

IMO class	3.2
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Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	3 - Moderately high
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	4 - High
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	ED - Evaporator/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TEEL-1 (mg/m3)	1 ppm
TEEL-2 (mg/m3)	13 ppm
TEEL-3 (mg/m3)	25 ppm

Ecotoxicity

METHAMIDOPHOS

UN Number: 2783

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number 2783

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	1310 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	141.13
Melting Point (°C)	46.1
Vapour Pressure (Pa)	0.002 [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Colour colourless

Transportation data

Package group	I/II/III
State	solid
IMO class	6.1

Reactivity data

Water	No
Base(s)	Yes
Metal(s) and alloys	Yes (mild steel and Cu)

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m ³)	10
TEEL-2 (mg/m ³)	60

Ecotoxicity

Methane

CAS Number: 72-82-8

Also known as: Methyl Hydride, Marsh Gas, Methane

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number	72-82-8
Formula	CH ₄

Physical chemical data

Physical State (25°C)	Gas
Molar mass (g/mol)	16.043
Solubility (g/L)	22 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	-161
Melting Point (°C)	-183
Critical temperature (°C)	190.56
Critical pressure (Pa)	4599000
Surface tension (mN/m)	14 [mN/m] at a temperature of -161°C
Interfacial tension (mN/m)	50 [mN/m] at a temperature of -161°C and salinity of 0‰
Vapour pressure at 70% of critical temperature (Pa)	447990
Flash Point (Pensky-Martens closed cup) (°C)	-188
Lower explosivity limit (LEL) (volume %)	5.3
Upper explosivity limit (UEL) (volume %)	14
Henry's constant (mol/(m ³ ·Pa))	68901

Behaviour at sea

Log k _{ow}	1.09
Log k _{oc}	0.6
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Bioconcentration factor (BCF)	2

Additional data

MARPOL pollution category

Category	Description
Other Substances	Substances which have been evaluated and found to fall outside Category X, Y or Z because they are considered to present no harm to marine resources, human health, amenities or other legitimate uses of the sea when discharged into the sea from tank cleaning of deballasting operations. The discharge of bilge or ballast water or other residues or mixtures containing these substances are not subject to any requirements of MARPOL Annex II.

Transportation data

Reactivity data

GESAMP Hazard profile

Interference with coastal amenities (E2)

G - Gas

Human toxicity threshold



Hazard statements

Physical

H220

Extremely flammable gas.

Ecotoxicity

Lowest median lethal concentration (LC50) on crustacean (mg/l) 46.6

Lowest median lethal concentration (LC50) on fishes (mg/l) 24.11

METHANE (compressed gas)

UN Number: 1971

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1971

Physical chemical data

Physical State (20°C)	Gas
Density (kg/m ³)	0.774 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	16.04
Density of gas (kg/m ³)	0.774
Boiling Point (°C)	-261.3
Melting Point (°C)	-182
Vapour Pressure (Pa)	25000000 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	595
Upper explosivity limit (UEL) (volume %)	15

Behaviour at sea

Additional data

Colour	colourless
Odour	weak odour

Transportation data

Transport mode	Gas, Packaged
Cargo group	31
State	liq.compr.gas
Temperature (°C)	< -162
Pressure (Pa)	under pressure
Family name	paraffins
IMO class	2(2.1)

Reactivity data

Water	No
Static electricity	Yes

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m3)	3000 ppm
TEEL-2 (mg/m3)	5000 ppm
TEEL-3 (mg/m3)	200000 ppm

Ecotoxicity

METHANE (refrigerated liquid)

UN Number: 1972

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1972

Physical chemical data

Physical State (20°C)	Gas
Density (kg/m ³)	0.774 [Kg/m ³] at a temperature of 20°C
Density of gas (kg/m ³)	0.774
Boiling Point (°C)	-161
Melting Point (°C)	-183
Vapour Pressure (Pa)	25000000 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	537
Upper explosivity limit (UEL) (volume %)	15

Behaviour at sea

Additional data

Colour	colourless
Odour	weak odour

Transportation data

Transport mode	Gas, Packaged
Ship type	2G
Cargo group	31
State	liquefied gas
Temperature (°C)	< -162
Pressure (Pa)	under pressure
Family name	paraffins
IMO class	2(2.1)

Reactivity data

Water	No
Static electricity	Yes

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m3)	3000 ppm
TEEL-2 (mg/m3)	5000 ppm
TEEL-3 (mg/m3)	200000 ppm

Ecotoxicity

METHANOL

UN Number: 1230 - CAS Number: 67-56-1

Also known as: COLONIAL SPIRIT, COLUMBIAN SPIRIT, Methylalcohol, Carbinol, Methanol

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number	1230
CAS number	67-56-1
Formula	CH ₄ O

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	792 [Kg/m ³] at a temperature of 20°C 805.5 [Kg/m ³] at a temperature of 5°C 801.3 [Kg/m ³] at a temperature of 10°C 793.2 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	0.776 [cSt] at a temperature of 20°C 0.68739 [cSt] at a temperature of 25°C 2.4209 [cSt] at a temperature of 5°C 2.2339 [cSt] at a temperature of 10°C 2.0171 [cSt] at a temperature of 20°C
Molar mass (g/mol)	32.04
Density of gas (kg/m ³)	1.419
Solubility (g/L)	10000000 [g/L] at a temperature of 20°C and salinity of 0‰
Boiling Point (°C)	64.7
Melting Point (°C)	-98
Critical molar volume (m ³ /mol)	0.000117
Critical temperature (°C)	512.5
Critical pressure (Pa)	8084000

Surface tension (mN/m)	22.5 [mN/m] at a temperature of 20°C
	20.14 [mN/m] at a temperature of 25°C
	23.88 [mN/m] at a temperature of 4.1°C
	23.06 [mN/m] at a temperature of 10.1°C
	22.67 [mN/m] at a temperature of 18.1°C
Vapour Pressure (Pa)	12865 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	455
Flash Point (°C)	11
Flash Point (Pensky-Martens closed cup) (°C)	12
Flash Point (Cleveland open cup) (°C)	15.6
Lower explosivity limit (LEL) (volume %)	5.5
Upper explosivity limit (UEL) (volume %)	36.5
Vapor enthalpy (J/Kg)	1098870 [J/Kg] at a temperature of 64.6°C
	1168154 [J/Kg] at a temperature of 25°C
Combustion enthalpy (J/Kg)	22660882
Specific heat capacity (J/(Kg·K))	2531
Henry's constant (mol/(m³·Pa))	0.46

Behaviour at sea

Log kow	-0.77
Log koc	0
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Bioconcentration factor (BCF)	10

Additional data

Colour	colourless
Odour	alcohol odour

MARPOL pollution category	Category	Description
	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.

Standard behavior classification	DE
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Transportation data

Package group	II
Cargo group	20
State	liquid

Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	alcohols, glycols
IMO class	3.2

Reactivity data

Abilities	Miscible in water.
Acid(s)	Yes
Base(s)	Yes
Static electricity	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Specific Health Concern (D3)	T - Specific Target Organ Toxicity following single or repeated exposure
Interference with coastal amenities (E2)	DE - Dissolver/Evaporator
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



IDHL

25000

Hazard statements	Physical		
	H225	Highly flammable liquid and vapour.	
	Health		
	H301	Toxic if swallowed.	
	H311	Toxic in contact with skin.	
	H331	Toxic if inhaled.	
	H370	Causes damage to organs.	
Precautionary statements	Prevention		
	P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.	
	P233	Keep container tightly closed.	
	P240	Ground/bond container and receiving equipment.	
	P241	Use explosion-proof electrical/ventilating/lighting/.../equipment.	
	P242	Use only non-sparking tools.	
	P243	Take precautionary measures against static discharge.	
	P260	Do not breathe dust/fume/gas/mist/vapours/spray.	
	P261	Avoid breathing dust/fume/gas/mist/vapours/spray.	
	P270	Do not eat, drink or smoke when using this product.	
	P271	Use only outdoors or in a well-ventilated area.	
	P280	Wear protective gloves/protective clothing/eye protection/face protection.	
		Response	
	P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.	
	P302 + P352	IF ON SKIN: Wash with plenty of soap and water.	
	P303 + P361 + P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.	
	P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.	
	P312	Call a POISON CENTER or doctor/physician if you feel unwell.	
	P361	Remove/Take off immediately all contaminated clothing.	
	P370 + P378	In case of fire: Use ... for extinction.	
		Storage	
	P403 + P235	Store in a well-ventilated place. Keep cool.	
	Disposal		
	P501	Dispose of contents/container to ...	
TLV-TWA	200		
ERPG-1 (ppm)	200		

ERPG-2 (ppm)	1000
ERPG-3 (ppm)	5000

Ecotoxicity

Lowest median lethal concentration (LC50) on crustacean (mg/l)	1700
Lowest median lethal concentration (LC50) on fishes (mg/l)	11.5
Highest no observed effect concentration (NOEC) on algae (mg/l)	530
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	6.7
Highest no observed effect concentration (NOEC) on fishes (mg/l)	0.04
Assessment factor (AF)	100 on the short term
Predicted No Effect Concentration (PNEC) (µg/l)	2080 [µg/l] on the short term

METHYL ACETATE

UN Number: 1231 - CAS Number: 79-20-9

Also known as: ACETATE DE METHYLE, ACETIC ACID, METHYL ESTER

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number	1231
CAS number	79-20-9

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	927 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	74.1
Density of gas (kg/m ³)	3.61
Boiling Point (°C)	57
Melting Point (°C)	-98
Vapour Pressure (Pa)	22752 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	502
Flash Point (°C)	-6
Lower explosivity limit (LEL) (volume %)	3.1
Upper explosivity limit (UEL) (volume %)	16

Behaviour at sea

Additional data

Colour	colourless
Odour	mild sweet
Standard behavior classification	DE

Transportation data

Package group	II
Cargo group	34
State	liquid

Temperature (°C)	ambient
Family name	esters
IMO class	3.2

Reactivity data

Water	Yes
Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes
Combustibles	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	DE - Dissolver/Evaporator
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

IDHL	3100
TLV-TWA	200
TEEL-1 (mg/m3)	250 ppm
TEEL-2 (mg/m3)	500 ppm
TEEL-3 (mg/m3)	3100 ppm

Ecotoxicity

METHYL ACETOACETATE

CAS Number: 105-45-3

Also known as: ACETOACETATE DE METHYLE, ACETOACETIC ACID, METHYL ESTER, BUTANOIC ACID, 3-OXO-METHYL ESTER

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 105-45-3

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1076 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	116.12
Density of gas (kg/m ³)	5.16
Boiling Point (°C)	169/170
Melting Point (°C)	-80
Vapour Pressure (Pa)	228 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	280
Flash Point (°C)	70
Lower explosivity limit (LEL) (volume %)	3.1
Upper explosivity limit (UEL) (volume %)	16

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless

Transportation data

Cargo group	34
State	liquid
Temperature (°C)	ambient
Family name	esters

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

METHYL ACETYLENE/PROPADIENE MIXTURES stabilized

UN Number: 1060

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1060

Physical chemical data

Physical State (20°C)	Gas
Density (kg/m ³)	1.94 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	40.1
Density of gas (kg/m ³)	1.94
Boiling Point (°C)	-38
Vapour Pressure (Pa)	747460 [Pa] at a temperature of 20°C
Lower explosivity limit (LEL) (volume %)	3.4
Upper explosivity limit (UEL) (volume %)	10.8

Behaviour at sea

Additional data

Colour	colourless
Odour	garlic odour

Transportation data

Transport mode	Gas,Packaged
Ship type	2G,2PG
Cargo group	30
State	liq.compr.gas
Temperature (°C)	< 52
Pressure (Pa)	under pressure
Family name	olefins
IMO class	2(2.1)

Reactivity data

Acid(s)	Yes
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Oxidizing agents	Yes
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GESAMP Hazard profile

Human toxicity threshold

IDHL	15000
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TLV-TWA	1000
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TEEL-1 (mg/m3)	1250 ppm
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TEEL-2 (mg/m3)	1250 ppm
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TEEL-3 (mg/m3)	3400 ppm
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Ecotoxicity

METHYL ACRYLATE inhibited

UN Number: 1919 - CAS Number: 96-33-3

Also known as: ACRYLATE DE METHYLE, ACRYLIC ACID, METHYL ESTER, CURITHANE 103 (T), Acrylic Acid Methyl Ester, Methyl Prop-2-Enoate, Methyl Acrylate

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1919
CAS number	96-33-3
Formula	C ₄ H ₆ O ₂

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	956 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	0.5055 [cSt] at a temperature of 20°C
Molar mass (g/mol)	86.09
Density of gas (kg/m ³)	3.831
Solubility (g/L)	52000 [g/L] at a temperature of 20°C and salinity of 0‰ 49400 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	80.8
Melting Point (°C)	-75
Critical molar volume (m ³ /mol)	0.000265
Critical temperature (°C)	536
Critical pressure (Pa)	4357000
Surface tension (mN/m)	24.2 [mN/m] at a temperature of 20°C
Interfacial tension (mN/m)	30 [mN/m] at a temperature of 20°C and salinity of 0‰
Vapour Pressure (Pa)	933 [Pa] at a temperature of 20°C 14665 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	390
Flash Point (°C)	-3
Flash Point (Pensky-Martens closed cup) (°C)	-2.8
Flash Point (Cleveland open cup) (°C)	-3
Lower explosivity limit (LEL) (volume %)	2.8

Upper explosivity limit (UEL) (volume %)	25
Vapor enthalpy (J/Kg)	384481 [J/Kg] at a temperature of 80.7°C
Combustion enthalpy (J/Kg)	5841329
Specific heat capacity (J/(Kg·K))	1845
Henry's constant (mol/(m ³ ·Pa))	20.26

Behaviour at sea

Persistence (days)	1.6
Log K _{ow}	0.8
Log K _{oc}	0.77
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	3100
Bioconcentration factor (BCF)	3

Additional data

Colour	colourless
Odour	sharp, sweet odour

MARPOL pollution category	Category	Description
	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.

Standard behavior classification	FED
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Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	14
State	liquid
Temperature (°C)	< 5°C, ambient
Pressure (Pa)	ambient
Family name	acrylates
IMO class	3.2

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	No

Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - $e < 1$, or $> ca. 7$, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



IDHL	1000	
Hazard statements	Physical	
	H225	Highly flammable liquid and vapour.
	Health	
	H302	Harmful if swallowed.
	H312	Harmful in contact with skin.
	H315	Causes skin irritation.
	H317	May cause an allergic skin reaction.
	H319	Causes serious eye irritation.
	H331	Toxic if inhaled.
	H335	May cause respiratory irritation.
	Environmental	
	H412	Harmful to aquatic life with long lasting effects.

Precautionary statements	Prevention
	P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
	P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
	P273 Avoid release to the environment.
	P280 Wear protective gloves/protective clothing/eye protection/face protection.
	Response
	P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P311 Call a POISON CENTER or doctor/physician.
TLV-TWA	10
TEEL-1 (mg/m3)	2 ppm
TEEL-2 (mg/m3)	7.5 ppm
TEEL-3 (mg/m3)	150 ppm

Ecotoxicity

Lowest median lethal concentration (LC50) on fishes (mg/l)	1.1
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	0.19
Assessment factor (AF)	500 on the short term
Predicted No Effect Concentration (PNEC) (µg/l)	0 [µg/l] on the short term

METHYL AMYL ACETATE

UN Number: 1233

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1233

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	860 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	144.22
Density of gas (kg/m ³)	6.45
Boiling Point (°C)	146
Vapour Pressure (Pa)	507 [Pa] at a temperature of 20°C
Flash Point (°C)	42
Lower explosivity limit (LEL) (volume %)	0.9
Upper explosivity limit (UEL) (volume %)	5.7

Behaviour at sea

Additional data

Colour	colourless
Odour	pleasant, fruit odour

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	34
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	esters
IMO class	3.3

Reactivity data

Acid(s) Yes

Oxidizing agents Yes

GESAMP Hazard profile

Human toxicity threshold

Ecotoxicity

METHYL AMYL ALCOHOL

UN Number: 2053 - CAS Number: 108-11-2

Also known as: ALCOOL METHYLAMYLIQUE

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number	2053
CAS number	108-11-2

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	810 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	102.18
Density of gas (kg/m ³)	4.515
Boiling Point (°C)	132
Melting Point (°C)	< -90
Vapour Pressure (Pa)	400 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	312
Flash Point (°C)	41
Upper explosivity limit (UEL) (volume %)	5.5

Behaviour at sea

Additional data

Colour	colourless
Odour	mild, alcohol-like
Standard behavior classification	FED

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	20
State	liquid

Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	alcohols, glycols
IMO class	3.3

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes
Reducing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	FED - Floater/Evaporator/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

IDHL	400
TLV-TWA	25

Ecotoxicity

METHYL AMYL KETONE

UN Number: 1110 - CAS Number: 110-43-0

Also known as: AMYLMETHYLCETONE, n-AMYLMETHYLCETONE

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number	1110
CAS number	110-43-0

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	820 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	114.19
Density of gas (kg/m ³)	> 1.29
Boiling Point (°C)	149
Melting Point (°C)	-35
Vapour Pressure (Pa)	345 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	393
Flash Point (°C)	39
Lower explosivity limit (LEL) (volume %)	1.1
Upper explosivity limit (UEL) (volume %)	7.9

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless
Standard behavior classification	FED

Transportation data

Package group	III
Cargo group	18
State	liquid

Temperature (°C)	ambient
Family name	ketones
IMO class	3.3

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes
Reducing agents	Yes
Combustibles	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	FED - Floater/Evaporator/Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

IDHL	800
TLV-TWA	50
TEEL-1 (mg/m3)	100 ppm
TEEL-2 (mg/m3)	125 ppm
TEEL-3 (mg/m3)	800 ppm

Ecotoxicity

METHYL BROMIDE

UN Number: 1062

Also known as: BROMOMETHANE, BROMURE DE METHYLE

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number 1062

Physical chemical data

Physical State (20°C)	Gas
Density (kg/m ³)	4.257 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	94.95
Density of gas (kg/m ³)	4.257
Boiling Point (°C)	3.8
Melting Point (°C)	-94
Vapour Pressure (Pa)	187000 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	538
Flash Point (°C)	194
Lower explosivity limit (LEL) (volume %)	10
Upper explosivity limit (UEL) (volume %)	15

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless to sweet odour

Transportation data

Transport mode	Bulk,Gas,Packaged
Ship type	1G
Cargo group	36
State	liquefied gas
Temperature (°C)	ambient

Pressure (Pa)	under pressure
Family name	halogenated hydrocarb
IMO class	2(2.3)

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

IDHL	2000
ERPG-2 (ppm)	50
ERPG-3 (ppm)	200

Ecotoxicity

METHYL BUTENOL

CAS Number: 556-82-1

Also known as: 1-BUTEN-3-OL, 3-METHYL

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

CAS number 556-82-1

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	824 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	824
Density of gas (kg/m ³)	3.83
Boiling Point (°C)	98/99
Vapour Pressure (Pa)	6800 (250°C) [Pa] at a temperature of 20°C
Flash Point (°C)	13

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless
Standard behavior classification	E/ED

Transportation data

Cargo group	20
Temperature (°C)	ambient
Family name	alcohols, glycols

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes

Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - $e < 1$, or $> ca. 7$, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

METHYL BUTYNOL

CAS Number: 115-19-5

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 115-19-5

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	867 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	84.12
Boiling Point (°C)	104/105
Melting Point (°C)	2.6
Flash Point (°C)	25

Behaviour at sea

Additional data

Colour	colourless to straw yellow
Odour	odourless

Transportation data

Cargo group	20
State	liquid
Temperature (°C)	ambient
Family name	alcohols, glycols

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

METHYL BUTYRATE

UN Number: 1237 - CAS Number: 623-42-7

Also known as: BUTANOIC ACID, METHYL ESTER, BUTYRATE DE METHYLE, BUTYRIC ACID, METHYL ESTER

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1237
CAS number	623-42-7

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	898 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	102.13
Density of gas (kg/m ³)	4.55
Boiling Point (°C)	102.3
Melting Point (°C)	-84.8
Vapour Pressure (Pa)	2455 [Pa] at a temperature of 20°C
Flash Point (°C)	14
Lower explosivity limit (LEL) (volume %)	0.9
Upper explosivity limit (UEL) (volume %)	3.5

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless
Standard behavior classification	FED

Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	34

State	liquid
Family name	esters
IMO class	3.2

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	ED - Evaporator/Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

METHYL CHLORIDE

UN Number: 1063

Also known as: CHLOROMETHANE, CHLORURE DE METHYLE

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number 1063

Physical chemical data

Physical State (20°C)	Gas
Density (kg/m ³)	2.412 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	50.49
Density of gas (kg/m ³)	2.412
Boiling Point (°C)	-24
Melting Point (°C)	-98
Vapour Pressure (Pa)	506540 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	625
Flash Point (°C)	-24
Lower explosivity limit (LEL) (volume %)	8.1
Upper explosivity limit (UEL) (volume %)	17.2

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless to sweet odour

Transportation data

Transport mode	Gas, Packaged
Ship type	2G, 2PG
Cargo group	36
State	liquefied gas
Temperature (°C)	ambient

Pressure (Pa)	under pressure
Family name	halogenated hydrocarb
IMO class	2(2.1)

Reactivity data

Water	No
Acid(s)	No
Base(s)	No
Metal(s) and alloys	No
Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

IDHL	10000
TLV-TWA	50
ERPG-2 (ppm)	400
ERPG-3 (ppm)	1000

Ecotoxicity

METHYL CYCLOHEXANE

UN Number: 2296 - CAS Number: 108-87-2

Also known as: CYCLOHEXYLMETHANE

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number	2296
CAS number	108-87-2

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	800 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	98.2
Density of gas (kg/m ³)	4.39
Boiling Point (°C)	100
Melting Point (°C)	-126
Vapour Pressure (Pa)	4800 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	258
Flash Point (°C)	-4
Lower explosivity limit (LEL) (volume %)	1.1
Upper explosivity limit (UEL) (volume %)	6.7

Behaviour at sea

Additional data

Colour	colourless
Odour	faint benzene-like

Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	31
State	liquid

Temperature (°C)	ambient
Family name	paraffins
IMO class	3.2

Reactivity data

Water	No
Static electricity	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	3 - ≥ 3 and < 4
Bioaccumulation in BCF (A1B)	3 - ≥ 100 and < 500
Bioaccumulation (A1)	3 - Moderate potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	1 - Low
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Specific Health Concern (D3)	A - Aspiration
Interference with coastal amenities (E2)	E - Evaporator
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

IDHL	1200
TLV-TWA	400
TEEL-1 (mg/m3)	1200 ppm
TEEL-2 (mg/m3)	1200 ppm
TEEL-3 (mg/m3)	1200 ppm

Ecotoxicity

METHYL DIETHANOLAMINE

CAS Number: 105-59-9

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 105-59-9

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1038 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	119.16
Boiling Point (°C)	247
Melting Point (°C)	-21
Vapour Pressure (Pa)	30 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	265
Flash Point (°C)	126
Lower explosivity limit (LEL) (volume %)	0.9
Upper explosivity limit (UEL) (volume %)	8.4

Behaviour at sea

Additional data

Colour colourless

Transportation data

State	liquid
Temperature (°C)	ambient
Family name	alkanolamines

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

METHYL ETHYL KETONE

UN Number: 1193

Also known as: 2-BUTANONE

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number 1193

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	810 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	72.11
Density of gas (kg/m ³)	3.225
Boiling Point (°C)	80
Melting Point (°C)	-86
Vapour Pressure (Pa)	10500 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	505
Flash Point (°C)	-1
Lower explosivity limit (LEL) (volume %)	1.8
Upper explosivity limit (UEL) (volume %)	11.5

Behaviour at sea

Additional data

Colour	colourless
Odour	sweet
Standard behavior classification	DE

Transportation data

Package group	II
Cargo group	18
State	liquid
Temperature (°C)	ambient

Pressure (Pa)	ambient
Family name	ketones
IMO class	3.2

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Static electricity	Yes
Oxidizing agents	Yes
Combustibles	Yes
Organic substance	Yes

GESAMP Hazard profile

Human toxicity threshold

IDHL	3000
TLV-TWA	200
TEEL-1 (mg/m3)	200 ppm
TEEL-2 (mg/m3)	2700 ppm
TEEL-3 (mg/m3)	4000 ppm

Ecotoxicity

METHYL FORMATE

UN Number: 1243 - CAS Number: 107-31-3

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1243
CAS number	107-31-3

Physical chemical data


Physical State (20°C)	Liquid
Density (kg/m ³)	977 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	60.1
Density of gas (kg/m ³)	2.709
Boiling Point (°C)	32
Melting Point (°C)	-100
Vapour Pressure (Pa)	64000 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	450
Flash Point (°C)	-20
Upper explosivity limit (UEL) (volume %)	22.7

Behaviour at sea

Additional data

Colour	colourless
Odour	pleasant odour
Standard behavior classification	DE

Transportation data

Transport mode	Bulk, Packaged
State	liquid
Temperature (°C)	< 29 
Pressure (Pa)	under pressure
IMO class	3.1

Reactivity data

Water	Yes
Acid(s)	No
Base(s)	No
Metal(s) and alloys	No
Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	0 - Not irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	DE - Dissolver/Evaporator
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

IDHL	5000
TLV-TWA	100
TEEL-1 (mg/m3)	150 ppm
TEEL-2 (mg/m3)	750 ppm
TEEL-3 (mg/m3)	4500 ppm

Ecotoxicity

METHYL HEPTYL KETONE

CAS Number: 821-55-6

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 821-55-6

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	832 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	142.24
Density of gas (kg/m ³)	6.32
Boiling Point (°C)	192
Melting Point (°C)	-21
Vapour Pressure (Pa)	< 130 [Pa] at a temperature of 20°C
Flash Point (°C)	64

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless

Transportation data

Cargo group	18
State	liquid
Temperature (°C)	ambient
Family name	ketones

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes

Organic substance	Yes
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GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	3 - ≥ 3 and < 4
Bioaccumulation (A1)	3 - Moderate potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Interference with coastal amenities (E2)	FED - Floater/Evaporator/Dissolver

Human toxicity threshold

TEEL-1 (mg/m3)	3 ppm
TEEL-2 (mg/m3)	20 ppm
TEEL-3 (mg/m3)	75 ppm

Ecotoxicity

METHYL ISOBUTYL KETONE

UN Number: 1245 - CAS Number: 108-10-1

Also known as: Hexanone, Hexone, Isobutyl Methyl Ketone, Isopropylacetone, 4-Methyl-2-Oxopentane, 2-Methyl-4-Pentanone, 4-Methyl-2-Pentanone, 2-Methylpropyl Methyl Ketone, Mibk, Methyl Isobutyl Cetone, Mic, Methyl Isobutyl Ketone

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1245
CAS number	108-10-1
Formula	C ₆ H ₁₂ O

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	302 [Kg/m ³] at a temperature of 20°C 814.5 [Kg/m ³] at a temperature of 5°C 810.2 [Kg/m ³] at a temperature of 10°C 803.1 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	0.76 [cSt] at a temperature of 20°C 0.68424 [cSt] at a temperature of 25°C 2.3327 [cSt] at a temperature of 5°C 2.8511 [cSt] at a temperature of 10°C 2.2164 [cSt] at a temperature of 20°C
Molar mass (g/mol)	100.16
Density of gas (kg/m ³)	4.463
Solubility (g/L)	18000 [g/L] at a temperature of 20°C and salinity of 0‰
Boiling Point (°C)	116.4
Melting Point (°C)	-80
Critical temperature (°C)	574.6
Critical pressure (Pa)	3270000
Surface tension (mN/m)	23.6 [mN/m] at a temperature of 20°C 24.47 [mN/m] at a temperature of 5.1°C 23.73 [mN/m] at a temperature of 11.8°C 23.61 [mN/m] at a temperature of 18.2°C

Vapour Pressure (Pa)	799 [Pa] at a temperature of 20°C
	2640 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	460
Flash Point (°C)	14
Flash Point (Pensky-Martens closed cup) (°C)	13
Flash Point (Cleveland open cup) (°C)	23
Lower explosivity limit (LEL) (volume %)	1.4
Upper explosivity limit (UEL) (volume %)	7.5
Vapor enthalpy (J/Kg)	342299 [J/Kg] at a temperature of 116.2°C
	403037 [J/Kg] at a temperature of 25°C
Combust enthalpy (J/Kg)	34700000
Specific heat capacity (J/(Kg·K))	2116.9
Combustion efficiency (%)	96
Mass flow rate of the combustion surface (Kg/(m²·s))	0.06
Rad fraction (%)	23
Henry's constant (mol/(m³·Pa))	14

Behaviour at sea

Persistence (days)	0.8
Log kow	1.38
Log koc	2.1
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Biodegradation in marine environment (Half-life) (days)	50
Bioconcentration factor (BCF)	6

Additional data

Colour	colourless
Odour	mild pleasant odour

MARPOL pollution category	Category	Description
	Z	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment.

Standard behavior classification	FED
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Transportation data

Package group	II
Cargo group	18
State	liquid

Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	ketones
IMO class	3.2

Reactivity data

Acid(s)	Yes
Base(s)	Yes
Static electricity	Yes
Oxidizing agents	Yes
Notable risks	Reacts with oxidizers.

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	FED - Floater/Evaporator/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



IDHL	500	
Hazard statements	Physical	
	H225	Highly flammable liquid and vapour.
	Health	
	H319	Causes serious eye irritation.
	H332	Harmful if inhaled.
	H335	May cause respiratory irritation.

Precautionary statements	Prevention	
	P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
	P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
	Response	
	P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

TLV-TWA	100
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Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	2000
Lowest median lethal concentration (LC50) on crustacean (mg/l)	1230
Lowest median lethal concentration (LC50) on fishes (mg/l)	505
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	7.8
Highest no observed effect concentration (NOEC) on fishes (mg/l)	57
Assessment factor (AF)	500 on the long term
Predicted No Effect Concentration (PNEC) (µg/l)	15.6 [µg/l] on the long term

METHYL METHACRYLATE MONOMER

inhibited

UN Number: 1247 - CAS Number: 80-62-6

Also known as: DIAKON (T), Methyl Alpha-Methyl Acrylate, Methyl 2-Methyl-2-Propenoate, Methyl 2-Methyl Propenoate, 2-Methyl 2-Propenoic Acid, Methyl Ester, 2-Methyl Propenoic Acid, Methyl Ester, Methylpropylene-2-Carboxylate, Mma, Methyl Ester, Methyl Methacrylate, Methacrylate De Methyle, Methyl α -Methyl Acrylate

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1247
CAS number	80-62-6
Formula	C ₅ H ₈ O ₂

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	945 [Kg/m ³] at a temperature of 20°C 957.4 [Kg/m ³] at a temperature of 5°C 953.4 [Kg/m ³] at a temperature of 10°C 943.8 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	0.65 [cSt] at a temperature of 20°C 0.56 [cSt] at a temperature of 25°C 2.1811 [cSt] at a temperature of 5°C 2.1292 [cSt] at a temperature of 10°C 1.9284 [cSt] at a temperature of 20°C
Molar mass (g/mol)	100.12
Density of gas (kg/m ³)	4.451
Solubility (g/L)	16000 [g/L] at a temperature of 20°C and salinity of 0‰ 13640 [g/L] at a temperature of 20°C and salinity of 0‰ 13000 [g/L] at a temperature of 20°C and salinity of 5‰ 10370 [g/L] at a temperature of 20°C and salinity of 30‰
Boiling Point (°C)	101
Melting Point (°C)	-48

Surface tension (mN/m)	28 [mN/m] at a temperature of 20°C
	27.77 [mN/m] at a temperature of 5.1°C
	27.1 [mN/m] at a temperature of 10.9°C
	25.99 [mN/m] at a temperature of 19.8°C
Interfacial tension (mN/m)	14.3 [mN/m] at a temperature of 20°C and salinity of 0‰
Vapour Pressure (Pa)	5332 [Pa] at a temperature of 20°C
	5100 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	430
Flash Point (°C)	10
Flash Point (Pensky-Martens closed cup) (°C)	2
Flash Point (Cleveland open cup) (°C)	10
Lower explosivity limit (LEL) (volume %)	2.1
Upper explosivity limit (UEL) (volume %)	12.5
Vapor enthalpy (J/Kg)	359568 [J/Kg] at a temperature of 101°C
Combust enthalpy (J/Kg)	25400000
Specific heat capacity (J/(Kg·K))	1910
Combustion efficiency (%)	96
Mass flow rate of the combustion surface (Kg/(m²·s))	0.06
Rad fraction (%)	23
Henry's constant (mol/(m³·Pa))	26.3

Behaviour at sea

Log kow	1.38
Log koc	2.11
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Bioconcentration factor (BCF)	6.2

Additional data

Colour	colourless
Odour	sharp, pleasant odour
MARPOL pollution category	Category
	Description
	Y
	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.
Standard behavior classification	ED

Transportation data

Transport mode	Bulk, Packaged
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Package group	II
Cargo group	14
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	under pressure
Family name	acrylates
IMO class	3.2

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	No
Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	ED - Evaporator/Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold



IDHL	4000
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Hazard statements	Physical	
	H225	Highly flammable liquid and vapour.
	Health	
	H315	Causes skin irritation.
	H317	May cause an allergic skin reaction.
Precautionary statements	H335	May cause respiratory irritation.
	Prevention	
	P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
	P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
	P280	Wear protective gloves/protective clothing/eye protection/face protection.
	Response	
	P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
Disposal		
	P501	Dispose of contents/container to ...
TLV-TWA	100	
TEEL-1 (mg/m3)	17 ppm	
TEEL-2 (mg/m3)	120 ppm	
TEEL-3 (mg/m3)	570 ppm	

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	> 110
Lowest median lethal concentration (LC50) on crustacean (mg/l)	69
Lowest median lethal concentration (LC50) on fishes (mg/l)	> 79
Highest no observed effect concentration (NOEC) on algae (mg/l)	49
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	37
Highest no observed effect concentration (NOEC) on fishes (mg/l)	40
Assessment factor (AF)	1000 on the short term 500 on the long term
Predicted No Effect Concentration (PNEC) (µg/l)	69 [µg/l] on the short term 74 [µg/l] on the long term

METHYL PARATHION liquid

UN Number: 3018

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 3018

Physical chemical data


Physical State (20°C)	Liquid
Density (kg/m ³)	1360 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	263.2
Boiling Point (°C)	120
Melting Point (°C)	35
Vapour Pressure (Pa)	0.001 [Pa] at a temperature of 20°C
Flash Point (°C)	45

Behaviour at sea

Additional data

Colour	white, brown
Odour	rotten egg, garlic odour
Standard behavior classification	D, SD

Transportation data

State	liquid, solid
Temperature (°C)	< 10 
Pressure (Pa)	under pressure
IMO class	6.1

Reactivity data

Water	Yes
Acid(s)	No
Base(s)	No
Metal(s) and alloys	No

Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

TLV-TWA	0.018
TEEL-1 (mg/m3)	0.34
TEEL-2 (mg/m3)	0.34
TEEL-3 (mg/m3)	15

Ecotoxicity

METHYL PROPYL KETONE

UN Number: 1249

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1249

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	810 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	86.1
Density of gas (kg/m ³)	3.87
Boiling Point (°C)	102
Melting Point (°C)	-78
Vapour Pressure (Pa)	1600 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	452
Lower explosivity limit (LEL) (volume %)	1.6
Upper explosivity limit (UEL) (volume %)	8.2

Behaviour at sea

Additional data

Colour	water-white
Odour	pleasant
Standard behavior classification	FED

Transportation data

Package group	II
Cargo group	18
State	liquid
Temperature (°C)	ambient
Family name	ketones
IMO class	3.2

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Static electricity	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	FED - Floater/Evaporator/Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

IDHL	1500
TEEL-1 (mg/m3)	150 ppm
TEEL-2 (mg/m3)	150 ppm
TEEL-3 (mg/m3)	1500 ppm

Ecotoxicity

METHYL SALICYLATE

UN Number: 3082 - CAS Number: 119-36-8

Also known as: o-ASINIC ACID, BENZOIC ACID, 2-METHOXY, BETULA OR GAULTHERIA OIL

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	3082
CAS number	119-36-8

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1174 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	152.15
Density of gas (kg/m ³)	6.77
Boiling Point (°C)	222
Melting Point (°C)	-8.6
Vapour Pressure (Pa)	6000 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	453
Flash Point (°C)	96

Behaviour at sea

Additional data

Colour	colourless, yellowish or reddi
Odour	odourless

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	34
State	liquid
Family name	esters

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	2 - ≥ 2 and < 3
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Specific Health Concern (D3)	R - Reprotoxicity
Interference with coastal amenities (E2)	SD - Sinker/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

Ecotoxicity

METHYL tertiary-BUTYL ETHER

UN Number: 2398 - CAS Number: 1634-04-4

Also known as: Tert-Butyl Methyl Ether, 2-Methoxy-2-Methyl Propane, Methyl T-Butyl Ether, Methyl-Tert-Butyl Ether, Methyl Tertiary Butyl Ether, Methyl 1,1-Dimethylethyl Ether, 2-Methyl-2-Methoxypropane, Mtbe, Methyl Butyl Ether, Methyl Tert-Butyl Ether, Methyl-Tertio-Butyl-Ether

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2398
CAS number	1634-04-4
Formula	C ₅ H ₁₂ O

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	740.5 [Kg/m ³] at a temperature of 20°C 757.4 [Kg/m ³] at a temperature of 5°C 752.7 [Kg/m ³] at a temperature of 10°C 753.1 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	0.47 [cSt] at a temperature of 20°C 1.756 [cSt] at a temperature of 5°C 1.7537 [cSt] at a temperature of 10°C 1.5137 [cSt] at a temperature of 20°C
Molar mass (g/mol)	88.15
Density of gas (kg/m ³)	3.87
Solubility (g/L)	48000 [g/L] at a temperature of 20°C and salinity of 0‰ 31780 [g/L] at a temperature of 20°C and salinity of 0‰ 26870 [g/L] at a temperature of 20°C and salinity of 5‰ 20550 [g/L] at a temperature of 20°C and salinity of 30‰
Boiling Point (°C)	55.2
Melting Point (°C)	-109
Critical temperature (°C)	467.1
Critical pressure (Pa)	3430000

Surface tension (mN/m)	20 [mN/m] at a temperature of 20°C
	18.3 [mN/m] at a temperature of 25°C
	20.04 [mN/m] at a temperature of 5°C
	25.02 [mN/m] at a temperature of 10.1°C
	18.06 [mN/m] at a temperature of 18.5°C
Vapour Pressure (Pa)	310 [Pa] at a temperature of 20°C 33000 [Pa] at a temperature of 25°C
Flash Point (°C)	-26
Flash Point (Pensky-Martens closed cup) (°C)	-28.2
Lower explosivity limit (LEL) (volume %)	1.26
Upper explosivity limit (UEL) (volume %)	8.4
Vapor enthalpy (J/Kg)	316960 [J/Kg] at a temperature of 55.25°C 338287 [J/Kg] at a temperature of 25°C
Combust enthalpy (J/Kg)	35300000
Specific heat capacity (J/(Kg·K))	2127
Combustion efficiency (%)	96
Mass flow rate of the combustion surface (Kg/(m²·s))	0.04
Rad fraction (%)	23
Henry's constant (mol/(m³·Pa))	43.8

Behaviour at sea

Log kow	1.06
Log koc	1.05
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Biodegradation in marine environment (Half-life) (days)	Not biodegradable
Bioconcentration factor (BCF)	1.5

Additional data

MARPOL pollution category	Category	Description
	Z	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment.
Standard behavior classification	FED	

Transportation data

Package group	II
Cargo group	41
State	liquid
IMO class	3.1

Reactivity data

Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	E - Evaporator
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold



Hazard statements	Physical	
	H225	Highly flammable liquid and vapour.
	Health	
	H315	Causes skin irritation.
Precautionary statements	Prevention	
	P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
	P243	Take precautionary measures against static discharge.
	P280	Wear protective gloves/protective clothing/eye protection/face protection.
	Response	
	P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
	Storage	
	P403 + P235	Store in a well-ventilated place. Keep cool.
TLV-TWA	40	
TEEL-1 (mg/m3)	50 ppm	
TEEL-2 (mg/m3)	570 ppm	

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	184
Lowest median lethal concentration (LC50) on crustacean (mg/l)	136
Lowest median lethal concentration (LC50) on fishes (mg/l)	574
Highest no observed effect concentration (NOEC) on algae (mg/l)	103
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	26
Highest no observed effect concentration (NOEC) on fishes (mg/l)	293.5
Assessment factor (AF)	100 on the short term 100 on the long term
Predicted No Effect Concentration (PNEC) (µg/l)	1360 [µg/l] on the short term 260 [µg/l] on the long term

METHYLAMINE anhydrous

UN Number: 1061

Also known as: AMINOMETHANE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1061

Physical chemical data

Physical State (20°C)	Gas
Density (kg/m ³)	1.393 [Kg/m ³] at a temperature of 20°C
Vapour Pressure (Pa)	40000 [Pa] at a temperature of 20°C
Flash Point (°C)	-18

Behaviour at sea

Additional data

Standard behavior classification GD

Transportation data

IMO class 2(2.1)

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

IDHL	100
TLV-TWA	10
ERPG-1 (ppm)	10
ERPG-2 (ppm)	100
ERPG-3 (ppm)	500

Ecotoxicity

METHYLAMINE solution in water (42% or less)

UN Number: 1235 - CAS Number: 74-89-5

Also known as: AMINOMETHANE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1235
CAS number	74-89-5

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	890 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	31.1 (pure)
Density of gas (kg/m ³)	1.39
Boiling Point (°C)	48
Melting Point (°C)	-38
Vapour Pressure (Pa)	40000 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	430
Flash Point (°C)	< 10
Lower explosivity limit (LEL) (volume %)	4.9
Upper explosivity limit (UEL) (volume %)	20.7

Behaviour at sea

Additional data

Colour	colourless
Odour	ammonia-like
Standard behavior classification	DE

Transportation data

Transport mode	Bulk, Packaged
Package group	II
State	liquid

Temperature (°C)	ambient
Family name	aliphatic amines
IMO class	3.2

Reactivity data

Water	No
Acid(s)	Yes
Metal(s) and alloys	Yes (Al, Cu, Zn)
Oxidizing agents	Yes
Reducing agents	Yes (Hg)
Combustibles	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	DE - Dissolver/Evaporator
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

IDHL	100
ERPG-1 (ppm)	10
ERPG-2 (ppm)	100
ERPG-3 (ppm)	500

Ecotoxicity

METHYLCYCLOPENTADIENE DIMER

CAS Number: 26472-00-4

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 26472-00-4

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	941 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	160.26
Density of gas (kg/m ³)	1.2
Boiling Point (°C)	200
Melting Point (°C)	-51
Flash Point (°C)	27
Upper explosivity limit (UEL) (volume %)	10

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless
Standard behavior classification	F/FE/E

Transportation data

Cargo group	30
State	liquid
Temperature (°C)	ambient
Family name	olefins

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	4 - ≥ 4 and < 5
Bioaccumulation (A1)	4 - High potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	F - Floating substance, not likely to evaporate or to dissolve quickly
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

TEEL-1 (mg/m3)	25
TEEL-2 (mg/m3)	200
TEEL-3 (mg/m3)	500

Ecotoxicity

METHYLSTYRENE

UN Number: 2303

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 2303

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	910 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	118.18
Density of gas (kg/m ³)	5.28
Boiling Point (°C)	163/165
Melting Point (°C)	-23
Vapour Pressure (Pa)	300 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	420
Flash Point (°C)	40
Lower explosivity limit (LEL) (volume %)	0.7
Upper explosivity limit (UEL) (volume %)	6.6

Behaviour at sea

Additional data

Colour	colourless
Odour	characteristic

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	30
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	olefins

IMO class	3.3
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Reactivity data

Water	No
Acid(s)	Yes
Base(s)	No
Metal(s) and alloys	Yes
Static electricity	Yes
Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

IDHL	700
TLV-TWA	50
TEEL-1 (mg/m3)	100 ppm
TEEL-2 (mg/m3)	100 ppm
TEEL-3 (mg/m3)	700 ppm

Ecotoxicity

MORPHOLINE

UN Number: 2054 - CAS Number: 110-91-8

Also known as: DIETHYLENE OXIMIDE, DIETHYLENIMIDE OXIDE

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number	2054
CAS number	110-91-8

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1000 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	87.12
Density of gas (kg/m ³)	3.87
Boiling Point (°C)	128.2
Melting Point (°C)	-5
Vapour Pressure (Pa)	10666 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	255
Flash Point (°C)	31
Lower explosivity limit (LEL) (volume %)	1.8
Upper explosivity limit (UEL) (volume %)	10.8

Behaviour at sea

Additional data

Colour	colourless
Odour	ammonia, fish odour
Standard behavior classification	DE

Transportation data

Transport mode	Bulk, Packaged
Package group	III
State	liquid

Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	aliphatic amines
IMO class	3.3

Reactivity data

Acid(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	3 - Corrosive
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

IDHL	8000
TLV-TWA	20
TEEL-1 (mg/m3)	30 ppm
TEEL-2 (mg/m3)	30 ppm
TEEL-3 (mg/m3)	1400 ppm

Ecotoxicity

MOTOR FUEL ANTI-KNOCK COMPOUNDS (containing lead alkyls)

UN Number: 1649

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1649

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m³)	1500/1700 [Kg/m ³] at a temperature of 20°C
Boiling Point (°C)	90/120
Melting Point (°C)	6.111111111
Vapour Pressure (Pa)	6000 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	> 140
Flash Point (°C)	38/100
Lower explosivity limit (LEL) (volume %)	1.8

Behaviour at sea

Additional data

Colour	red, orange or blue
Odour	sweet, fruity

Transportation data

Transport mode	Bulk, Packaged
Cargo group	33
State	liquid
Temperature (°C)	ambient
IMO class	6.1

Reactivity data

Water	No
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Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Human toxicity threshold

IDHL	40 mg/m3
TLV-TWA	0.15 mg/m3

Ecotoxicity

MUSTARD GAS

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1274 [Kg/m ³] at a temperature of 20°C
Boiling Point (°C)	216
Melting Point (°C)	13.5
Vapour Pressure (Pa)	9.33 [Pa] at a temperature of 20°C
Flash Point (°C)	105

Behaviour at sea

Additional data

Transportation data

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

	10 min	30 min	60 min	4 hrs	8 hrs
AEGL-1 (ppm)	0.06	0.02	0.01	0.003	0.001
AEGL-2 (ppm)	0.09	0.03	0.02	0.004	0.002
AEGL-3 (ppm)	0.59	0.41	0.32	0.08	0.04

Ecotoxicity

MYRCENE

CAS Number: 123-35-3

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 123-35-3

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	801 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	136.24
Density of gas (kg/m ³)	6.03
Boiling Point (°C)	167
Vapour Pressure (Pa)	930 [Pa] at a temperature of 20°C
Flash Point (°C)	39

Behaviour at sea

Additional data

Colour	yellow tainted
Odour	pleasant
Standard behavior classification	FE

Transportation data

Cargo group	30
Family name	olefins

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	4 - ≥4 and <5
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Bioaccumulation (A1)	4 - High potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	1 - Low
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	2 - Irritating
Interference with coastal amenities (E2)	F - Floating substance, not likely to evaporate or to dissolve quickly
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

N,N'-DIMETHYLFORMAMIDE

UN Number: 2265 - CAS Number: 68-12-2

Also known as: N,N-DIMETHYLFORMAMIDE, DIMETHYL FORMAMIDE, DMF, DMFA, Dimethylformamide

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2265
CAS number	68-12-2
Formula	C ₃ H ₇ NO

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	950 [Kg/m ³] at a temperature of 20°C 944.5 [Kg/m ³] at a temperature of 25°C
Kinematic viscosity (cSt)	0.85 [cSt] at a temperature of 25°C
Molar mass (g/mol)	73.09
Density of gas (kg/m ³)	3.225
Solubility (g/L)	10000000 [g/L] at a temperature of 20°C and salinity of 0‰
Boiling Point (°C)	153
Melting Point (°C)	-61
Critical molar volume (m ³ /mol)	0.000262
Critical temperature (°C)	649.6
Critical pressure (Pa)	4480000
Surface tension (mN/m)	36.42 [mN/m] at a temperature of 20°C
Vapour Pressure (Pa)	500 [Pa] at a temperature of 20°C 516 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	440
Flash Point (°C)	58
Flash Point (Pensky-Martens closed cup) (°C)	58
Flash Point (Cleveland open cup) (°C)	67
Lower explosivity limit (LEL) (volume %)	2.2
Upper explosivity limit (UEL) (volume %)	15.2
Vapor enthalpy (J/Kg)	641503 [J/Kg] at a temperature of 25°C

Specific heat capacity (J/(Kg·K))	2060
Henry's constant (mol/(m ³ ·Pa))	0.00747

Behaviour at sea

Log kow	-0.87
Log koc	0
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Bioconcentration factor (BCF)	0.3

Additional data

Colour	colourless
Odour	weak ammonia odour
MARPOL pollution category	Category Description

Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.
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Transportation data

Package group	III
Cargo group	10
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	amides
IMO class	3.3

Reactivity data

Abilities	Miscible in water.
Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable

Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



IDHL	3500	
Hazard statements	Physical	
	H226 Flammable liquid and vapour.	
	Health	
	H312 Harmful in contact with skin.	
	H319 Causes serious eye irritation.	
	H332 Harmful if inhaled.	
Precautionary statements	Prevention	
	P261 Avoid breathing dust/fume/gas/mist/vapours/spray.	
	P280 Wear protective gloves/protective clothing/eye protection/face protection.	
	Response	
	P302 + P352 IF ON SKIN: Wash with plenty of soap and water.	
	P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.	
	P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.	
	P308 + P313 IF exposed or concerned: Get medical advice/attention.	
	TLV-TWA	10
	ERPG-2 (ppm)	100
ERPG-3 (ppm)	200	

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	> 1000
Lowest median lethal concentration (LC50) on crustacean (mg/l)	> 100

Lowest median lethal concentration (LC50) on fishes (mg/l)	1430
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	1140
Assessment factor (AF)	50 on the short term
Predicted No Effect Concentration (PNEC) (µg/l)	22800 [µg/l] on the short term

N-AMINOETHYLPIPERAZINE

UN Number: 2815 - CAS Number: 140-31-8

Also known as: 1-(2-AMINOETHYL)PIPERAZINE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2815
CAS number	140-31-8

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	985 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	129.24
Density of gas (kg/m ³)	5.68
Boiling Point (°C)	222
Melting Point (°C)	-19
Vapour Pressure (Pa)	150 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	360
Flash Point (°C)	93.3

Behaviour at sea

Additional data

Colour	pale yellow
Odour	ammoniacal odour

Transportation data

Transport mode	Bulk, Packaged
Package group	III
State	liquid
Family name	aliphatic amines

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	No
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Skin irritation/corrosivity (D1)	3 - Corrosive
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Specific Health Concern (D3)	Ss - Skin Sensitization
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TEEL-1 (mg/m3)	7.5
TEEL-2 (mg/m3)	50
TEEL-3 (mg/m3)	500

Ecotoxicity

n-AMYLENE

UN Number: 1108

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1108

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	641 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	70.13
Density of gas (kg/m ³)	2.71
Boiling Point (°C)	30.1
Vapour Pressure (Pa)	66000 [Pa] at a temperature of 20°C
Flash Point (°C)	-18
Lower explosivity limit (LEL) (volume %)	1.4
Upper explosivity limit (UEL) (volume %)	8.7

Behaviour at sea

Additional data

Colour	colourless
Odour	gasoline odour
Standard behavior classification	DE, ED, E

Transportation data

Transport mode	Bulk, Packaged
Cargo group	30
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	olefins
IMO class	3.1

Reactivity data

Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m3)	750 ppm
TEEL-2 (mg/m3)	6000 ppm
TEEL-3 (mg/m3)	75000 ppm

Ecotoxicity

n-BUTANOL

UN Number: 1120 - CAS Number: 71-36-3

Also known as: BUTANOL, 1-BUTANOL, BUTAN-1-OL, n-BUTANOL, 2-BUTYL ALCOHOL, BUTYL ALCOHOL, n-BUTYL ALCOHOL, Normal Primary BUTYL ALCOHOL, BUTYL HYDROXIDE, CC SS 203, N-Butanol, Butyric Alcohol, 1-Hydroxybutane, Propylcarbinol, N-Butyl Alcohol

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1120
CAS number	71-36-3
Formula	C ₄ H ₁₀ O

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	810 [Kg/m ³] at a temperature of 20°C 821.3 [Kg/m ³] at a temperature of 5°C 817.9 [Kg/m ³] at a temperature of 10°C 811.6 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	3.7 [cSt] at a temperature of 20°C 3.1377 [cSt] at a temperature of 25°C 5.82 [cSt] at a temperature of 5°C 11.97 [cSt] at a temperature of 10°C 4.7807 [cSt] at a temperature of 20°C
Molar mass (g/mol)	74.12
Density of gas (kg/m ³)	3.29
Solubility (g/L)	77000 [g/L] at a temperature of 20°C and salinity of 0‰ 68600 [g/L] at a temperature of 25°C and salinity of 0‰ 72670 [g/L] at a temperature of 20°C and salinity of 0‰ 66730 [g/L] at a temperature of 20°C and salinity of 5‰ 54260 [g/L] at a temperature of 20°C and salinity of 30‰
Boiling Point (°C)	117.7
Melting Point (°C)	-89
Critical molar volume (m ³ /mol)	0.000274
Critical temperature (°C)	563

Critical pressure (Pa)	4414000
Surface tension (mN/m)	24.6 [mN/m] at a temperature of 20°C 24.93 [mN/m] at a temperature of 25°C 25.71 [mN/m] at a temperature of 3.8°C 24.9 [mN/m] at a temperature of 11.1°C 24.25 [mN/m] at a temperature of 18.4°C
Interfacial tension (mN/m)	50 [mN/m] at a temperature of 25°C and salinity of 0‰
Vapour Pressure (Pa)	626 [Pa] at a temperature of 20°C 893 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	340
Flash Point (°C)	35
Flash Point (Pensky-Martens closed cup) (°C)	28.9
Flash Point (Cleveland open cup) (°C)	36.1
Lower explosivity limit (LEL) (volume %)	1.4
Upper explosivity limit (UEL) (volume %)	11.2
Vapor enthalpy (J/Kg)	584045 [J/Kg] at a temperature of 117.6°C 706277 [J/Kg] at a temperature of 25°C
Combust enthalpy (J/Kg)	35900000
Specific heat capacity (J/(Kg·K))	2390.7
Combustion efficiency (%)	98
Mass flow rate of the combustion surface (Kg/(m ² ·s))	0.05
Rad fraction (%)	22
Henry's constant (mol/(m ³ ·Pa))	0.89

Behaviour at sea

Log kow	0.88
Log koc	1.85
Aqueous photolysis (Half-life)	4.09
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Biodegradation in marine environment (Half-life) (days)	10
Bioconcentration factor (BCF)	2.72

Additional data

Colour	colourless				
Odour	alcohol odour				
MARPOL pollution category	<table border="1"> <thead> <tr> <th>Category</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Z</td> <td>Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment.</td> </tr> </tbody> </table>	Category	Description	Z	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment.
Category	Description				
Z	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment.				

Transportation data

Package group	III
Cargo group	20
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	alcohols, glycols
IMO class	3.3

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	No
Static electricity	Yes
Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - $e < 1$, or $> ca. 7$, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	ED - Evaporator/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



IDHL	8000
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Hazard statements	Physical	
	H226	Flammable liquid and vapour.
	Health	
	H302	Harmful if swallowed.
	H315	Causes skin irritation.
	H318	Causes serious eye damage.
Precautionary statements	Prevention	
	P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
	P233	Keep container tightly closed.
	P240	Ground/bond container and receiving equipment.
	P241	Use explosion-proof electrical/ventilating/lighting/.../equipment.
	P280	Wear protective gloves/protective clothing/eye protection/face protection.
	Response	
	P303 + P361 + P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
	P370 + P378	In case of fire: Use ... for extinction.
	Storage	
	P403 + P235	Store in a well-ventilated place. Keep cool.
Disposal		
P501	Dispose of contents/container to ...	
TLV-TWA	50	
TEEL-1 (mg/m3)	50 ppm	
TEEL-2 (mg/m3)	50 ppm	
TEEL-3 (mg/m3)	1400 ppm	

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	225
Lowest median lethal concentration (LC50) on crustacean (mg/l)	1328
Lowest median lethal concentration (LC50) on fishes (mg/l)	1376
Highest no observed effect concentration (NOEC) on algae (mg/l)	129
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	20
Assessment factor (AF)	1000 on the short term 1000 on the long term
Predicted No Effect Concentration (PNEC) (µg/l)	225 [µg/l] on the short term 20 [µg/l] on the long term

n-BUTYL ACETATE

UN Number: 1123 - CAS Number: 123-86-4

Also known as: ACETATE DE BUTYLE, ACETIC ACID, n-BUTYL ESTER, BUTYL ACETATE, 1-BUTYL ACETATE, n-BUTYL ACETATE, BUTYL ETHANOATE, Acetic Acid, N-Butyl Ester, 1-Acetoxybutane, N-Butyl Acetate

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1123
CAS number	123-86-4
Formula	C ₆ H ₁₂ O ₂

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	875 [Kg/m ³] at a temperature of 20°C 896 [Kg/m ³] at a temperature of 5°C 891.6 [Kg/m ³] at a temperature of 10°C 881 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	0.83 [cSt] at a temperature of 20°C 0.77 [cSt] at a temperature of 25°C 2.7009 [cSt] at a temperature of 5°C 2.5236 [cSt] at a temperature of 10°C 2.3383 [cSt] at a temperature of 20°C
Molar mass (g/mol)	116.16
Density of gas (kg/m ³)	5.16
Solubility (g/L)	7000 [g/L] at a temperature of 20°C and salinity of 0‰ 8500 [g/L] at a temperature of 25°C and salinity of 0‰ 7240 [g/L] at a temperature of 20°C and salinity of 0‰ 6970 [g/L] at a temperature of 20°C and salinity of 5‰ 5670 [g/L] at a temperature of 20°C and salinity of 30‰
Boiling Point (°C)	126
Melting Point (°C)	-77

Surface tension (mN/m)	24.88 [mN/m] at a temperature of 25°C
	25.8 [mN/m] at a temperature of 5.7°C
	25.02 [mN/m] at a temperature of 10.6°C
	24.83 [mN/m] at a temperature of 18.4°C
Interfacial tension (mN/m)	57 [mN/m] at a temperature of 20°C and salinity of 0‰
Vapour Pressure (Pa)	1160 [Pa] at a temperature of 20°C
	1990 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	370
Flash Point (°C)	22
Flash Point (Pensky-Martens closed cup) (°C)	22
Lower explosivity limit (LEL) (volume %)	1.4
Upper explosivity limit (UEL) (volume %)	7.6
Vapor enthalpy (J/Kg)	312328 [J/Kg] at a temperature of 126°C
	377582 [J/Kg] at a temperature of 25°C
Combustion enthalpy (J/Kg)	37700000
Specific heat capacity (J/(Kg·K))	1961
Combustion efficiency (%)	98
Mass flow rate of the combustion surface (Kg/(m²·s))	0.1
Rad fraction (%)	23
Henry's constant (mol/(m³·Pa))	28.8

Behaviour at sea

Persistence (days)	0.8
Log kow	1.82
Log koc	0.35
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	114
Biodegradation in marine environment (Half-life) (days)	10
Bioconcentration factor (BCF)	13.1

Additional data

Colour	colourless	
Odour	pleasant, fruit odour	
MARPOL pollution category	Category	Description
	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.
Standard behavior classification	FED	

Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	34
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	esters
IMO class	3.2/3.3

Reactivity data

Acid(s)	Yes
Static electricity	Yes
Oxidizing agents	Yes
Notable risks	Vapours may form an explosive mixture with air.

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	E - Evaporator
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold



IDHL	10000
Hazard statements	Physical H226 Flammable liquid and vapour. Health H336 May cause drowsiness or dizziness.

Precautionary statements	Prevention
	P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
	P233 Keep container tightly closed.
	P235 Keep cool.
	P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
	P280 Wear protective gloves/protective clothing/eye protection/face protection.
	Response
	P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
	P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
	P312 Call a POISON CENTER or doctor/physician if you feel unwell.
TLV-TWA	200
ERPG-2 (ppm)	200
ERPG-3 (ppm)	3000

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	2
Lowest median lethal concentration (LC50) on crustacean (mg/l)	32
Lowest median lethal concentration (LC50) on fishes (mg/l)	18
Highest no observed effect concentration (NOEC) on algae (mg/l)	296
Assessment factor (AF)	1000 on the short term 10000 on the long term
Predicted No Effect Concentration (PNEC) (µg/l)	18 [µg/l] on the short term 1.8 [µg/l] on the long term

n-BUTYL ACRYLATE inhibited

UN Number: 2348 - CAS Number: 141-32-2

Also known as: ACRYLATE DE BUTYLE, ACRYLIC ACID, N-BUTYL ESTER, ACRYLIC ACID, BUTYL ESTER, 2-AGROPENOIC ACID, N-BUTYL ESTER, BUTYL ACRYLATE, BUTYL ACRYLATE MONOMER (Inhibited), n-BUTYL ANYLATE, BUTYL-2-PROPENOATE, n-BUTYL 2-PROPENOATE, Acrylic Acid, Butyl Ester, Acrylic Acid, N-Butyl Ester, Butyl 2-Propenoate, 2-Propenoic Acid, Butyl Ester, 2-Propenoic Acid, N-Butyl Ester, Acrylate De N-Butyle, N-Butyl Acrylate

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2348
CAS number	141-32-2
Formula	C ₇ H ₁₂ O ₂

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	899 [Kg/m ³] at a temperature of 20°C 913.1 [Kg/m ³] at a temperature of 5°C 908.5 [Kg/m ³] at a temperature of 10°C 900.1 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	2.8255 [cSt] at a temperature of 5°C 2.7518 [cSt] at a temperature of 10°C 2.6219 [cSt] at a temperature of 20°C
Molar mass (g/mol)	128.17
Density of gas (kg/m ³)	5.702
Solubility (g/L)	2000 [g/L] at a temperature of 25°C and salinity of 0‰ 1610 [g/L] at a temperature of 20°C and salinity of 0‰ 1340 [g/L] at a temperature of 20°C and salinity of 5‰ 1440 [g/L] at a temperature of 20°C and salinity of 30‰
Boiling Point (°C)	149
Melting Point (°C)	-65

Surface tension (mN/m)	20 [mN/m] at a temperature of 25°C
	26.77 [mN/m] at a temperature of 6.1°C
	26.56 [mN/m] at a temperature of 11.3°C
	25.63 [mN/m] at a temperature of 19.1°C
Interfacial tension (mN/m)	60 [mN/m] at a temperature of 25°C and salinity of 0‰
Vapour Pressure (Pa)	9100 [Pa] at a temperature of 20°C
	727 [Pa] at a temperature of 25°C
Flash Point (°C)	37
Flash Point (Pensky-Martens closed cup) (°C)	39
Flash Point (Cleveland open cup) (°C)	47.8
Lower explosivity limit (LEL) (volume %)	1.5
Upper explosivity limit (UEL) (volume %)	9.9
Combustion enthalpy (J/Kg)	29400000
Specific heat capacity (J/(Kg·K))	1958
Combustion efficiency (%)	96
Mass flow rate of the combustion surface (Kg/(m²·s))	0.05
Rad fraction (%)	23
Henry's constant (mol/(m³·Pa))	46.59

Behaviour at sea

Log kow	2.36
Log koc	1.54
Aqueous photolysis (Half-life)	0.0138
Biodegradation in estuary environment (Half-life) (days)	1100
Biodegradation in marine environment (Half-life) (days)	10
Bioconcentration factor (BCF)	13.1

Additional data

Colour	colourless				
Odour	sharp, fragrant odour				
MARPOL pollution category	<table border="1"> <thead> <tr> <th>Category</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Y</td> <td>Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.</td> </tr> </tbody> </table>	Category	Description	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.
Category	Description				
Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.				

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	14

State	liquid
Temperature (°C)	ambient
Pressure (Pa)	under pressure
Family name	acrylates
IMO class	3.3

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	No
Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	No
Notable risks	Polymerize easily, inhibitor in comercial products.

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	2 - ≥ 2 and < 3
Bioaccumulation in BCF (A1B)	2 - ≥ 10 and < 100
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	SD - Sinker/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



Hazard statements	Health
	H315 Causes skin irritation.
	H317 May cause an allergic skin reaction.
	H319 Causes serious eye irritation.
	H332 Harmful if inhaled.
	H335 May cause respiratory irritation.
	Environmental
	H412 Harmful to aquatic life with long lasting effects.

Precautionary statements	Prevention
	P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
	P273 Avoid release to the environment.
	P280 Wear protective gloves/protective clothing/eye protection/face protection.
	Response
	P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
TLV-TWA	10
ERPG-1 (ppm)	0.05
ERPG-2 (ppm)	25
ERPG-3 (ppm)	250

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	2.6
Lowest median lethal concentration (LC50) on crustacean (mg/l)	8.2
Lowest median lethal concentration (LC50) on fishes (mg/l)	2.1
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	0.136
Assessment factor (AF)	100 on the short term 10000 on the long term
Predicted No Effect Concentration (PNEC) (µg/l)	21 [µg/l] on the short term 0.21 [µg/l] on the long term

n-BUTYL METHACRYLATE inhibited

UN Number: 2227 - CAS Number: 97-88-1

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2227
CAS number	97-88-1

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	897.5 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	142.2
Density of gas (kg/m ³)	6.192
Boiling Point (°C)	163
Melting Point (°C)	-75
Vapour Pressure (Pa)	300 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	294
Flash Point (°C)	46

Behaviour at sea

Persistence (days)	1.6
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Additional data

Colour	colourless
Odour	mild odour
Standard behavior classification	FED

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	14
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	under pressure

Family name	acrylates
IMO class	3.3

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	No
Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	2 - ≥ 2 and < 3
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	FE - Floater/Evaporator
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

TEEL-1 (mg/m3)	7.5
TEEL-2 (mg/m3)	50
TEEL-3 (mg/m3)	500

Ecotoxicity

n-BUTYL PROPIONATE

UN Number: 1914

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1914

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	840 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	130.2
Density of gas (kg/m ³)	5.805
Boiling Point (°C)	145
Melting Point (°C)	-90
Vapour Pressure (Pa)	424 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	425
Flash Point (°C)	32
Lower explosivity limit (LEL) (volume %)	1.1
Upper explosivity limit (UEL) (volume %)	6.8

Behaviour at sea

Additional data

Colour	colourless
Odour	characteristic

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	34
State	liquid
Temperature (°C)	ambient
Family name	esters
IMO class	3.3

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m3)	500
TEEL-2 (mg/m3)	500
TEEL-3 (mg/m3)	500

Ecotoxicity

n-BUTYRIC ACID

UN Number: 2820 - CAS Number: 107-92-6

Also known as: ACIDE BUTYRIQUE, BUTANOIC ACID

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2820
CAS number	107-92-6

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	958 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	88.1
Density of gas (kg/m ³)	3.6
Boiling Point (°C)	164
Vapour Pressure (Pa)	57 [Pa] at a temperature of 20°C
Upper explosivity limit (UEL) (volume %)	10

Behaviour at sea

Additional data

Colour	colourless
Odour	rancid, butter odour

Transportation data

Transport mode	Bulk, Packaged
Package group	III
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	organic acids

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	No
Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TEEL-1 (mg/m3)	40 ppm
TEEL-2 (mg/m3)	250 ppm
TEEL-3 (mg/m3)	250 ppm

Ecotoxicity

n-DECYLALCOHOL

Also known as: ALCOOL DECYLIQUE, ANTAK (T), CAPRIC ALCOHOL, CAPRINIC ALCOHOL, DECANOL, DECAN-1-OL, n-DECANOL, DECATYL ALCOHOL, DECYL ALCOHOL, DECYLIC ALCOHOL

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	840 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	158.29
Density of gas (kg/m ³)	6.31
Boiling Point (°C)	230
Vapour Pressure (Pa)	133 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	285
Flash Point (°C)	82

Behaviour at sea

Additional data

Colour	colourless to light yellow
Odour	weak alcohol odour

Transportation data

Cargo group	20
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	alcohols, glycols

Reactivity data

Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes

Organic substance

Yes

GESAMP Hazard profile

Interference with coastal amenities (E2)

Fp - Persistent slick forming substance

Human toxicity threshold

Ecotoxicity

N-ETHYL BUTYLAMINE

CAS Number: 13360-63-9

Also known as: BUTYLETHYLAMINE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 13360-63-9

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	740 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	101.2
Density of gas (kg/m ³)	4.515
Boiling Point (°C)	108.5
Vapour Pressure (Pa)	2710 [Pa] at a temperature of 20°C
Flash Point (°C)	13

Behaviour at sea

Additional data

Colour	water-white
Odour	amine

Transportation data

State	liquid
Temperature (°C)	ambient
Family name	aliphatic amines

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	3 - Corrosive
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	FED - Floater/Evaporator/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

Ecotoxicity

N-ETHYL CYCLOHEXYLAMINE

CAS Number: 5459-93-8

Also known as: CYCLOHEXYLAMINE, N-ETHYL, N-CYCLOHEXYLETHYLAMINE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 5459-93-8

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	853 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	127.23
Density of gas (kg/m ³)	5.68
Boiling Point (°C)	165
Melting Point (°C)	-45
Ignition Temperature (°C)	545
Flash Point (°C)	30

Behaviour at sea

Additional data

Colour	colourless
Odour	musky ammonia
Standard behavior classification	FD/FED/ED

Transportation data

State	liquid
Temperature (°C)	ambient
Family name	aliphatic amines

Reactivity data

Water	No
Acid(s)	Yes

Oxidizing agents	Yes
Combustibles	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	2 - ≥ 2 and < 3
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	3 - Corrosive
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	FED - Floater/Evaporator/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

Ecotoxicity

n-HEPTANOIC ACID

CAS Number: 111-14-8

Also known as: ACIDE n-HEPTANOIQUE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 111-14-8

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	900 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	130.19
Density of gas (kg/m ³)	5.8
Boiling Point (°C)	223
Melting Point (°C)	-7.5
Vapour Pressure (Pa)	130 [Pa] at a temperature of 20°C
Flash Point (°C)	107

Behaviour at sea

Additional data

Colour	colourless
Odour	rancid
Standard behavior classification	FD

Transportation data

State	liquid
Family name	organic acids

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes

Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	2 - ≥ 2 and < 3
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	FD - Floater/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TEEL-1 (mg/m3)	15 ppm
TEEL-2 (mg/m3)	100 ppm
TEEL-3 (mg/m3)	600 ppm

Ecotoxicity

n-HEPTENE

UN Number: 2278

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 2278

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	697 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	98.18
Density of gas (kg/m ³)	5.173
Boiling Point (°C)	93
Melting Point (°C)	119
Vapour Pressure (Pa)	15960 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	260

Behaviour at sea

Additional data

Colour	colourless
Odour	gasoline odour

Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	30
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	PF
IMO class	3.2

Reactivity data

Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	3 - ≥ 3 and < 4
Bioaccumulation (A1)	3 - Moderate potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	E - Evaporator
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

n-HEXANE

UN Number: 1208 - CAS Number: 100-54-3

Also known as: DIPROPYL, Hexane, Hexyl Hydride, Normal Hexane, N-Hexane

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1208
CAS number	100-54-3
Formula	C ₆ H ₁₄

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	659 [Kg/m ³] at a temperature of 20°C 675.3 [Kg/m ³] at a temperature of 5°C 669.6 [Kg/m ³] at a temperature of 10°C 661.3 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	0.47 [cSt] at a temperature of 20°C 0.45 [cSt] at a temperature of 25°C 1.7918 [cSt] at a temperature of 5°C 1.5532 [cSt] at a temperature of 10°C 1.6936 [cSt] at a temperature of 20°C
Molar mass (g/mol)	86.17
Density of gas (kg/m ³)	3.87
Solubility (g/L)	10 [g/L] at a temperature of 20°C and salinity of 0‰ 8 [g/L] at a temperature of 25°C and salinity of 35.3‰ 8.8 [g/L] at a temperature of 20°C and salinity of 0‰ 7.1 [g/L] at a temperature of 20°C and salinity of 5‰ 6.6 [g/L] at a temperature of 20°C and salinity of 30‰
Boiling Point (°C)	68.9
Melting Point (°C)	-95

Surface tension (mN/m)	18.43 [mN/m] at a temperature of 20°C
	17.89 [mN/m] at a temperature of 25°C
	19.92 [mN/m] at a temperature of 5°C
	19.09 [mN/m] at a temperature of 10°C
	18.6 [mN/m] at a temperature of 17.7°C
Interfacial tension (mN/m)	51.1 [mN/m] at a temperature of 20°C and salinity of 0‰
Vapour Pressure (Pa)	15996 [Pa] at a temperature of 20°C
	19998 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	260
Flash Point (°C)	-22
Flash Point (Pensky-Martens closed cup) (°C)	-22
Lower explosivity limit (LEL) (volume %)	1.1
Upper explosivity limit (UEL) (volume %)	7.7
Vapor enthalpy (J/Kg)	334494 [J/Kg] at a temperature of 69°C
	366295 [J/Kg] at a temperature of 25°C
Combust enthalpy (J/Kg)	44700000
Specific heat capacity (J/(Kg·K))	2270.2
Combustion efficiency (%)	96
Mass flow rate of the combustion surface (Kg/(m²·s))	0.08
Rad fraction (%)	33
Henry's constant (mol/(m³·Pa))	171239

Behaviour at sea

Log kow	3.29
Log koc	2.9
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Bioconcentration factor (BCF)	585

Additional data

Colour	colourless
Odour	gasoline odour

MARPOL pollution category	Category	Description
	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.

Transportation data

Package group	II
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Cargo group	31
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	paraffins
IMO class	3.1

Reactivity data

Water	No
Static electricity	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	3 - ≥ 3 and < 4
Bioaccumulation (A1)	3 - Moderate potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	E - Evaporator
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold



IDHL	5000
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Hazard statements	Physical	
	H225	Highly flammable liquid and vapour.
	Health	
	H304	May be fatal if swallowed and enters airways.
	H315	Causes skin irritation.
	H336	May cause drowsiness or dizziness.
	H361	Suspected of damaging fertility or the unborn child.
	H373	May cause damage to organs through prolonged or repeated exposure, exposure cause the hazard:
	Environmental	
	H411	Toxic to aquatic life with long lasting effects.

Precautionary statements	General	
	P102	Keep out of reach of children.
	P103	Read label before use.
	Prevention	
	P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
	P241	Use explosion-proof electrical/ventilating/lighting/.../equipment.
	P243	Take precautionary measures against static discharge.
	P260	Do not breathe dust/fume/gas/mist/vapours/spray.
	P271	Use only outdoors or in a well-ventilated area.
	P273	Avoid release to the environment.
	P280	Wear protective gloves/protective clothing/eye protection/face protection.
	Response	
	P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
	P331	Do NOT induce vomiting.

TLV-TWA	50
TEEL-1 (mg/m3)	400 ppm
TEEL-2 (mg/m3)	3300 ppm
TEEL-3 (mg/m3)	8600 ppm

Ecotoxicity

Lowest median lethal concentration (LC50) on crustacean (mg/l)	50
Lowest median lethal concentration (LC50) on fishes (mg/l)	2.5

n-HEXANOIC ACID

UN Number: 2829 - CAS Number: 142-62-1

Also known as: ACIDE n-HEXANOIQUE, BUTYLACETIC ACID, n-CAPROIC ACID, CAPRONIC ACID

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2829
CAS number	142-62-1

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	927 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	110.16
Density of gas (kg/m ³)	5.16
Boiling Point (°C)	202/203
Melting Point (°C)	-3
Flash Point (°C)	104

Behaviour at sea

Additional data

Colour	colourless or slighty yellow
Odour	goat-like
Standard behavior classification	FD/FED

Transportation data

Package group	III
State	liquid
Temperature (°C)	ambient
Family name	organic acids

Reactivity data

Water	No
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Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	2 - ≥ 2 and < 3
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	FD - Floater/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TEEL-1 (mg/m3)	15
TEEL-2 (mg/m3)	100
TEEL-3 (mg/m3)	500

Ecotoxicity

n-HEXANOL

UN Number: 2282 - CAS Number: 111-27-3

Also known as: AMYL CARBINOL, CAPROYL ALCOHOL

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2282
CAS number	111-27-3

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	850 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	102.18
Density of gas (kg/m ³)	4.515
Boiling Point (°C)	157.3
Melting Point (°C)	-45
Vapour Pressure (Pa)	130 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	290
Flash Point (°C)	63
Lower explosivity limit (LEL) (volume %)	1.2
Upper explosivity limit (UEL) (volume %)	7.7

Behaviour at sea

Additional data

Colour	colourless
Odour	sweet odour

Transportation data

Package group	III
Cargo group	20
State	liquid
Temperature (°C)	ambient

Pressure (Pa)	ambient
Family name	alcohols, glycols
IMO class	3.3

Reactivity data

Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	FD - Floater/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TEEL-1 (mg/m ³)	2 ppm
TEEL-2 (mg/m ³)	15 ppm
TEEL-3 (mg/m ³)	75 ppm

Ecotoxicity

n-PENTANE

UN Number: 1265 - CAS Number: 109-66-0

Also known as: N-Pentane, Pentane

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1265
CAS number	109-66-0
Formula	C ₅ H ₁₂

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	626 [Kg/m ³] at a temperature of 20°C 642.9 [Kg/m ³] at a temperature of 5°C 638.4 [Kg/m ³] at a temperature of 10°C 627.8 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	0.35771 [cSt] at a temperature of 25°C 13377 [cSt] at a temperature of 5°C 1.3315 [cSt] at a temperature of 10°C 0.98758 [cSt] at a temperature of 20°C
Molar mass (g/mol)	72.15
Density of gas (kg/m ³)	3.211
Solubility (g/L)	38 [g/L] at a temperature of 25°C and salinity of 0‰ 28 [g/L] at a temperature of 25°C and salinity of 35‰ 37 [g/L] at a temperature of 20°C and salinity of 0‰ 38 [g/L] at a temperature of 20°C and salinity of 5‰ 27 [g/L] at a temperature of 20°C and salinity of 30‰
Boiling Point (°C)	36.3
Melting Point (°C)	-130
Critical molar volume (m ³ /mol)	0.000311
Critical temperature (°C)	469.7
Critical pressure (Pa)	3370000

Surface tension (mN/m)	16 [mN/m] at a temperature of 20°C
	15.49 [mN/m] at a temperature of 25°C
	17.55 [mN/m] at a temperature of 5.1°C
	16.77 [mN/m] at a temperature of 10.2°C
	16.43 [mN/m] at a temperature of 16.43°C
Vapour Pressure (Pa)	533320 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	285
Flash Point (°C)	-20
Flash Point (Pensky-Martens closed cup) (°C)	-49
Lower explosivity limit (LEL) (volume %)	1.4
Upper explosivity limit (UEL) (volume %)	8.5
Vapor enthalpy (J/Kg)	357455 [J/Kg] at a temperature of 30.06°C
	366190 [J/Kg] at a temperature of 25°C
Combustion enthalpy (J/Kg)	48635463
Specific heat capacity (J/(Kg·K))	2317
Henry's constant (mol/(m³·Pa))	12800

Behaviour at sea

Log K_{ow}	3.64
Log K_{oc}	1.86
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Bioconcentration factor (BCF)	80

Additional data

Colour	colourless
Odour	gasoline odour

MARPOL pollution category	Category	Description
	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.

Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	31
State	liquid
Temperature (°C)	ambient

Pressure (Pa)	ambient
Family name	paraffins
IMO class	3.1

Reactivity data

Water	No
Static electricity	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	3 - ≥ 3 and < 4
Bioaccumulation (A1)	3 - Moderate potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	E - Evaporator
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold



IDHL	15000	
Hazard statements	Physical	
	H224	Extremely flammable liquid and vapour.
	Health	
	H304	May be fatal if swallowed and enters airways.
	H336	May cause drowsiness or dizziness.
	Environmental	
H411	Toxic to aquatic life with long lasting effects.	

Precautionary statements**Prevention**

- P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
- P233 Keep container tightly closed.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting/.../equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
- P271 Use only outdoors or in a well-ventilated area.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response

- P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P312 Call a POISON CENTER or doctor/physician if you feel unwell.
- P331 Do NOT induce vomiting.
- P370 + P378 In case of fire: Use ... for extinction.
- P391 Collect spillage.

Storage

- P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
- P403 + P235 Store in a well-ventilated place. Keep cool.
- P405 Store locked up.

Disposal

- P501 Dispose of contents/container to ...

TLV-TWA	600
TEEL-1 (mg/m3)	610 ppm
TEEL-2 (mg/m3)	610 ppm
TEEL-3 (mg/m3)	1500 ppm

Ecotoxicity

Lowest median lethal concentration (LC50) on crustacean (mg/l)	1.19
Highest no observed effect concentration (NOEC) on algae (mg/l)	4.549

Assessment factor (AF)	100 on the short term
Predicted No Effect Concentration (PNEC) ($\mu\text{g/l}$)	27 [$\mu\text{g/l}$] on the short term

n-PROPANOLAMINE

CAS Number: 156-87-6

Also known as: 3-AMINO, 1-PROPANOL

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 156-87-6

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	982 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	75.11
Density of gas (kg/m ³)	3.35
Boiling Point (°C)	188
Melting Point (°C)	11
Flash Point (°C)	79

Behaviour at sea

Additional data

Colour	colourless to pale yellow
Odour	fishy

Transportation data

Family name alkanolamines

Reactivity data

Water	No
Acid(s)	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A) 0 - e <1, or > ca.7, or Mol. Wt. > 1000

Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TEEL-1 (mg/m3)	0.04
TEEL-2 (mg/m3)	0.3
TEEL-3 (mg/m3)	500

Ecotoxicity

n-PROPYL ACETATE

UN Number: 1276 - CAS Number: 109-60-4

Also known as: ACETATE DE n-PROPYLE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1276
CAS number	109-60-4

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	886 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	102.13
Density of gas (kg/m ³)	4.541
Boiling Point (°C)	101
Melting Point (°C)	-95
Vapour Pressure (Pa)	5332 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	430
Flash Point (°C)	10
Lower explosivity limit (LEL) (volume %)	1.7

Behaviour at sea

Additional data

Colour	colourless
Odour	mild odour
Standard behavior classification	ED

Transportation data

Package group	II
Cargo group	34
State	liquid
Temperature (°C)	ambient

Pressure (Pa)	ambient
Family name	esters
IMO class	3.2

Reactivity data

Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	ED - Evaporator/Dissolver
Effects on wildlife and bottom habitats (E3)	1 - Is a floater; and/or is slightly acutely toxic; and/or is mildly irritant to skin and/or eyes

Human toxicity threshold

IDHL	8000
TLV-TWA	200
TEEL-1 (mg/m3)	250 ppm
TEEL-2 (mg/m3)	1000 ppm
TEEL-3 (mg/m3)	1700 ppm

Ecotoxicity

n-PROPYLAMINE

UN Number: 1277 - CAS Number: 107-10-8

Also known as: 1-AMINOPROPANE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1277
CAS number	107-10-8

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	720 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	59.11
Density of gas (kg/m ³)	2.64
Boiling Point (°C)	49
Melting Point (°C)	-83
Vapour Pressure (Pa)	33000 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	260
Flash Point (°C)	-37
Upper explosivity limit (UEL) (volume %)	10.4

Behaviour at sea

Additional data

Colour	colourless
Odour	ammonia-like
Standard behavior classification	DE

Transportation data

Transport mode	Bulk, Packaged
Package group	II
State	liquid
Temperature (°C)	cool

Family name	aliphatic amines
IMO class	3.1

Reactivity data

Water	No
Acid(s)	Yes
Metal(s) and alloys	Yes
Oxidizing agents	Yes
Combustibles	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	DE - Dissolver/Evaporator
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TEEL-1 (mg/m3)	50 ppm
TEEL-2 (mg/m3)	250 ppm
TEEL-3 (mg/m3)	250 ppm

Ecotoxicity

n-PROPYLBENZENE

UN Number: 2364 - CAS Number: 103-65-1

Also known as: BENZENE, PROPYL, Isocumene, Propylbenzene

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2364
CAS number	103-65-1
Formula	C ₉ H ₁₂

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	862 [Kg/m ³] at a temperature of 20°C 859.3 [Kg/m ³] at a temperature of 25°C
Molar mass (g/mol)	120.19
Density of gas (kg/m ³)	5.34
Solubility (g/L)	60 [g/L] at a temperature of 15°C and salinity of 0‰ 55 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	160
Melting Point (°C)	-100
Critical molar volume (m ³ /mol)	0.00044
Critical temperature (°C)	638.35
Critical pressure (Pa)	3200000
Vapour Pressure (Pa)	332 [Pa] at a temperature of 20°C 455 [Pa] at a temperature of 25°C
Flash Point (°C)	30
Flash Point (Pensky-Martens closed cup) (°C)	30
Lower explosivity limit (LEL) (volume %)	0.8
Upper explosivity limit (UEL) (volume %)	6
Vapor enthalpy (J/Kg)	384554 [J/Kg] at a temperature of 25°C
Specific heat capacity (J/(Kg·K))	1786
Henry's constant (mol/(m ³ ·Pa))	1064

Behaviour at sea

Log kow	3.6
Log koc	2.91
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Bioconcentration factor (BCF)	138

Additional data

Colour	light yellow
Odour	odourless
MARPOL pollution category	Category Description
	Y Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	32
State	liquid
Temperature (°C)	ambient
Family name	aromatic hydrocarbons
IMO class	3.3

Reactivity data

Water	No
Acid(s)	Yes
Metal(s) and alloys	No
Oxidizing agents	Yes

GESAMP Hazard profile

Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Interference with coastal amenities (E2)	FE - Floater/Evaporator

Human toxicity threshold

TEEL-1 (mg/m3)	75 ppm
TEEL-2 (mg/m3)	600 ppm
TEEL-3 (mg/m3)	3000 ppm

ECOTOXICITY

Lowest median lethal concentration (LC50) on fishes (mg/l) 1.55

n-PROPYLCHLORIDE

UN Number: 1278 - CAS Number: 540-54-5

Also known as: CHLOROPROPANE, CHLORO-1-PROPANE, 1-CHLOROPROPANE, CHLORURE DE PROPYLE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1278
CAS number	540-54-5

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	892 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	78.54
Density of gas (kg/m ³)	3.5
Boiling Point (°C)	46/47
Melting Point (°C)	-123
Ignition Temperature (°C)	520
Flash Point (°C)	-18
Lower explosivity limit (LEL) (volume %)	2.6
Upper explosivity limit (UEL) (volume %)	11

Behaviour at sea

Additional data

Colour	colourless
Odour	chloroform-like
Standard behavior classification	FD/FED/E

Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	36
State	liquid

Temperature (°C)	ambient
Family name	halogenated hydrocarbons
IMO class	3.1

Reactivity data

Water	No
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	2 - ≥ 2 and < 3
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Interference with coastal amenities (E2)	FED - Floater/Evaporator/Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

NAPHTHA petroleum

UN Number: 1268 - CAS Number: 64742-82-1

Also known as: Naphtha (Petroleum), Hydrodesulfurized Heavy, Naphta Lourd (Petrole) Desulfure

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1268
CAS number	64742-82-1

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Boiling Point (°C)	138
Melting Point (°C)	-26
Vapour Pressure (Pa)	200-600 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	229
Flash Point (°C)	38-60
Flash Point (Cleveland open cup) (°C)	47
Lower explosivity limit (LEL) (volume %)	0.6
Upper explosivity limit (UEL) (volume %)	6.5

Behaviour at sea

Additional data

Odour	gasoline odour
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MARPOL pollution category	Category	Description
	Other Substances	Substances which have been evaluated and found to fall outside Category X, Y or Z because they are considered to present no harm to marine resources, human health, amenities or other legitimate uses of the sea when discharged into the sea from tank cleaning of deballasting operations. The discharge of bilge or ballast water or other residues or mixtures containing these substances are not subject to any requirements of MARPOL Annex II.

Transportation data

Package group	II
Cargo group	33
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	miscell. hydroc. mixt
IMO class	3.1/3.2/3.

Reactivity data

Acid(s)	Yes
Base(s)	Yes
Static electricity	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Interference with coastal amenities (E2)	G - Gas
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Human toxicity threshold



IDHL	10000
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Hazard statements	Health
	H304 May be fatal if swallowed and enters airways.
	H340 May cause genetic defects. Exposure cause the hazard:
	H350 May cause cancer.

Precautionary statements	Prevention
	P201 Obtain special instructions before use.
	Response
	P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
	P308 + P313 IF exposed or concerned: Get medical advice/attention.
	P331 Do NOT induce vomiting.

TLV-TWA	100
TEEL-1 (mg/m3)	300 ppm
TEEL-2 (mg/m3)	395 ppm
TEEL-3 (mg/m3)	395 ppm

Ecotoxicity

Lowest median lethal concentration (LC50) on fishes (mg/l)	2.1
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NAPHTHA solvent

UN Number: 1268

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1268

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	860 [Kg/m ³] at a temperature of 20°C
Boiling Point (°C)	130
Vapour Pressure (Pa)	399 [Pa] at a temperature of 20°C
Lower explosivity limit (LEL) (volume %)	0.8

Behaviour at sea

Persistence (days) 2.7

Additional data

Colour	colourless
Standard behavior classification	FE

Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	33
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	miscell. hydroc. mixt
IMO class	3.1/3.2/3.

Reactivity data

Acid(s)	Yes
Base(s)	Yes

Static electricity	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Human toxicity threshold

IDHL	10000
TLV-TWA	100

Ecotoxicity

NAPHTHALENE molten

UN Number: 2304 - CAS Number: 91-20-3

Also known as: Naphthalin, Naphthene, Tar Camphor, White Tar, Naphthalene, Naphtalene

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2304
CAS number	91-20-3
Formula	C ₁₀ H ₈

Physical chemical data

Physical State (20°C)	Solid
Physical State (25°C)	Solid
Density (kg/m ³)	1140 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	0.96 [cSt] at a temperature of 20°C
Molar mass (g/mol)	128.18
Density of gas (kg/m ³)	5.702
Solubility (g/L)	31 [g/L] at a temperature of 25°C and salinity of 0‰ 23 [g/L] at a temperature of 25°C and salinity of 35‰
Boiling Point (°C)	218
Melting Point (°C)	80
Critical molar volume (m ³ /mol)	0.000407
Critical temperature (°C)	748.5
Critical pressure (Pa)	4050000
Surface tension (mN/m)	31.8 [mN/m] at a temperature of 20°C
Vapour Pressure (Pa)	130 [Pa] at a temperature of 20°C 10.5 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	540
Flash Point (°C)	80
Flash Point (Pensky-Martens closed cup) (°C)	88
Flash Point (Cleveland open cup) (°C)	79
Lower explosivity limit (LEL) (volume %)	0.9
Upper explosivity limit (UEL) (volume %)	5.9
Vapor enthalpy (J/Kg)	337052 [J/Kg] at a temperature of 218°C

Combustion enthalpy (J/Kg)	38900000
Specific heat capacity (J/(Kg·K))	1292.8
Combustion efficiency (%)	70
Mass flow rate of the combustion surface (Kg/(m ² ·s))	0.06
Rad fraction (%)	30
Henry's constant (mol/(m ³ ·Pa))	37.85

Behaviour at sea

Log kow	3.7
Log koc	3.13
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Biodegradation in marine environment (Half-life) (days)	Not biodegradable
Bioconcentration factor (BCF)	427

Additional data

Colour	colourless
Odour	mothball odour

MARPOL pollution category	Category	Description
	Other Substances	Substances which have been evaluated and found to fall outside Category X, Y or Z because they are considered to present no harm to marine resources, human health, amenities or other legitimate uses of the sea when discharged into the sea from tank cleaning of deballasting operations. The discharge of bilge or ballast water or other residues or mixtures containing these substances are not subject to any requirements of MARPOL Annex II.

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	32
State	liquid
Temperature (°C)	elevated
Pressure (Pa)	ambient
Family name	aromatic hydrocarbons
IMO class	4.1

Reactivity data

Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	3 - ≥ 3 and < 4
Bioaccumulation in BCF (A1B)	3 - ≥ 100 and < 500
Bioaccumulation (A1)	3 - Moderate potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	1 - Low
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



IDHL	500
Hazard statements	Physical
	H228 Flammable solid.
	Health
	H302 Harmful if swallowed.
	H351 Suspected of causing cancer.
Environmental	
H410 Very toxic to aquatic life with long lasting effects.	

Precautionary statements	Prevention	
	P202	Do not handle until all safety precautions have been read and understood.
	P234	Keep only in original container.
	P270	Do not eat, drink or smoke when using this product.
	P273	Avoid release to the environment.
	P281	Use personal protective equipment as required.
	Response	
	P301 + P330 + P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
	P303 + P361 + P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
	P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P308 + P313	IF exposed or concerned: Get medical advice/attention.
	P370 + P378	In case of fire: Use ... for extinction.
	Disposal	
	P501	Dispose of contents/container to ...

TLV-TWA	10
TEEL-1 (mg/m ³)	15 ppm
TEEL-2 (mg/m ³)	15 ppm
TEEL-3 (mg/m ³)	250 ppm

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	2.96
Lowest median lethal concentration (LC50) on crustacean (mg/l)	0.8
Lowest median lethal concentration (LC50) on fishes (mg/l)	1.6
Highest no observed effect concentration (NOEC) on algae (mg/l)	> 4.3
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	0.5
Highest no observed effect concentration (NOEC) on fishes (mg/l)	0.12
Assessment factor (AF)	100 on the short term 100 on the long term
Predicted No Effect Concentration (PNEC) (µg/l)	8 [µg/l] on the short term 1.2 [µg/l] on the long term

NAPHTHENIC ACIDS

UN Number: 3082 - CAS Number: 1338-24-5

Also known as: ACIDES NAPHTHENIQUES

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	3082
CAS number	1338-24-5

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	982 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	200
Boiling Point (°C)	140-370
Melting Point (°C)	-35
Flash Point (°C)	149

Behaviour at sea

Additional data

Colour	gold to black
Odour	odourless

Transportation data

State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient

Reactivity data

GESAMP Hazard profile

Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
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Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Interference with coastal amenities (E2)	FD - Floater/Dissolver

Human toxicity threshold

Ecotoxicity

NEODECANOIC ACID

CAS Number: 26896-20-8

Also known as: ACIDE NEODECANOIQUE, 2,2-DIMETHYLOCTANOIC ACID

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 26896-20-8

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m³)	920 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	172.27
Density of gas (kg/m³)	7.74
Boiling Point (°C)	250/257
Melting Point (°C)	< 40
Flash Point (°C)	94

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless

Transportation data

Temperature (°C)	ambient
Family name	organic acids

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	Yes
Oxidizing agents	Yes

Organic substance	Yes
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GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	4 - ≥ 4 and < 5
Bioaccumulation (A1)	4 - High potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	0 - Not irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	Fp - Persistent slick forming substance
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

TEEL-1 (mg/m3)	40
TEEL-2 (mg/m3)	300
TEEL-3 (mg/m3)	500

Ecotoxicity

NICKEL CYANIDE

UN Number: 1653 - CAS Number: 98-95-3

Also known as: CYANURE DE NICKEL

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number	1653
CAS number	98-95-3

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	2400 [Kg/m ³] at a temperature of 20°C

Behaviour at sea

Persistence (days)	1.6
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Additional data

Colour	light green, yellow-brown
Odour	weak almond odour
Marine pollutant	P
Standard behavior classification	D, SD, S

Transportation data

Package group	II
State	solid
Temperature (°C)	ambient
IMO class	6.1

Reactivity data

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation in BCF (A1B)	1 - ≥ 1 and < 10

Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	4 - Very high
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	SD - Sinker/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TEEL-1 (mg/m3)	1.13
TEEL-2 (mg/m3)	9.44
TEEL-3 (mg/m3)	18.9

Ecotoxicity

Nitric Acid

CAS Number: 7697-37-2

Also known as: Hydrogen Nitrate, Aqua Fortis, Nitric Acid, Acide Nitrique

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number	7697-37-2
Formula	HNO ₃

Physical chemical data

Physical State (25°C)	Liquid
Molar mass (g/mol)	63.012
Solubility (g/L)	10000000 [g/L] at a temperature of 20°C and salinity of 0‰
Boiling Point (°C)	83
Melting Point (°C)	-41.6
Vapor enthalpy (J/Kg)	620517 [J/Kg] at a temperature of 25°C
Specific heat capacity (J/(Kg·K))	1744

Behaviour at sea

Log kow	0.21
Log koc	1.21

Additional data

MARPOL pollution category	Category	Description
	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.

Transportation data

Reactivity data

Abilities

Miscible in water.

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	ED - Evaporator/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



Hazard statements	Physical	
	H272	May intensify fire, oxidiser.
	H290	May be corrosive to metals.
	Health	
H314	Causes severe skin burns and eye damage.	

Precautionary statements**Prevention**

- P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
- P220 Keep/Store away from clothing/.../combustible materials.
- P221 Take any precaution to avoid mixing with combustibles...
- P234 Keep only in original container.
- P260 Do not breathe dust/fume/gas/mist/vapours/spray.
- P264 Wash ... thoroughly after handling.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response

- P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P310 Immediately call a POISON CENTER or doctor/physician.
- P363 Wash contaminated clothing before reuse.
- P390 Absorb spillage to prevent material damage.

Storage

- P404 Store in a closed container.
- P406 Store in corrosive resistant/... container with a resistant inner liner.

Disposal

- P501 Dispose of contents/container to ...

Ecotoxicity

Lowest median lethal concentration (LC50) on crustacean (mg/l) 180

NITRIC ACID (all concentrations up 70% acid)

UN Number: 2031

Also known as: ACIDE NITRIQUE (contenant plus de 70% d'acide nitrique), AQUAFORTIS, AZOTIC ACID

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 2031

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1490 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	63
Density of gas (kg/m ³)	2.838
Boiling Point (°C)	121
Melting Point (°C)	-42
Vapour Pressure (Pa)	6400 [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Colour	colourless to light brown
Odour	choking odour

Transportation data

Transport mode	Bulk, Packaged
Package group	II
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	nitric acid

Reactivity data

Water	No
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Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	Yes
Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation (A1)	0 - No potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	3 - Moderately high
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	3 - Moderately high
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	4 - High
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

IDHL	100
ERPG-3 (ppm)	78

Ecotoxicity

NITRILOTRIACETIC ACID AND SALTS

CAS Number: 5094-31-3

Also known as: ACIDE NITRILOTRIACETIQUE ET SELS

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 5094-31-3

Physical chemical data

Physical State (20°C) Solid

Molar mass (g/mol) 191

Behaviour at sea

Additional data

Colour white

Odour odourless

Transportation data

State solid

Temperature (°C) ambient

Pressure (Pa) ambient

Reactivity data

GESAMP Hazard profile

Bioaccumulation in logPow (A1A) 0 - e <1, or > ca.7, or Mol. Wt. > 1000

Bioaccumulation (A1) 0 - No potential to bioaccumulate

Biodegradation (A2) R - Readily biodegradable

Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l)) 1 - Practically non-toxic

Chronic aquatic toxicity (B2) (NOEC (mg/l)) 0 - Negligible

Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg)) 1 - Slight

Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TEEL-1 (mg/m3)	100
TEEL-2 (mg/m3)	500
TEEL-3 (mg/m3)	500

Ecotoxicity

NITROBENZENE

UN Number: 1662 - CAS Number: 98-95-3

Also known as: Nitrobenzol, Oil Of Mirbane, Nitrobenzene

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1662
CAS number	98-95-3
Formula	C ₆ H ₅ NO ₂

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	1204 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	1.6865 [cSt] at a temperature of 20°C 1.5477 [cSt] at a temperature of 25°C
Molar mass (g/mol)	123.11
Density of gas (kg/m ³)	7.74
Solubility (g/L)	2090 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	211.1
Melting Point (°C)	5.7
Critical temperature (°C)	720
Critical pressure (Pa)	405300
Surface tension (mN/m)	46.34 [mN/m] at a temperature of 20°C
Vapour Pressure (Pa)	27 [Pa] at a temperature of 20°C 32.7 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	480
Flash Point (°C)	88
Flash Point (Pensky-Martens closed cup) (°C)	88
Lower explosivity limit (LEL) (volume %)	1.8
Upper explosivity limit (UEL) (volume %)	40
Vapor enthalpy (J/Kg)	352700 [J/Kg] at a temperature of 210.8°C 446755 [J/Kg] at a temperature of 25°C
Combustion enthalpy (J/Kg)	24250000

Specific heat capacity (J/(Kg·K))	1509
Henry's constant (mol/(m ³ ·Pa))	2.43

Behaviour at sea

Persistence (days)	2.7
Log kow	1.85
Log koc	2.35
Aqueous photolysis (Half-life)	133
Bioconcentration factor (BCF)	24

Additional data

Colour	light yellow to brown	
Odour	almond, shoe polish odour	
MARPOL pollution category	Category	Description
	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.
Standard behavior classification	SD	

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	43
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	miscell. water solut.
IMO class	6.1

Reactivity data

Acid(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥1 and <2
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable

Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	E - Evaporator
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold



IDHL	200
Hazard statements	Health
	H301 Toxic if swallowed.
	H311 Toxic in contact with skin.
	H331 Toxic if inhaled.
	H351 Suspected of causing cancer.
	H361 Suspected of damaging fertility or the unborn child.
	H372 Causes damage to organs through prolonged or repeated exposure, exposure cause the hazard:
	Environmental
	H411 Toxic to aquatic life with long lasting effects.
	Precautionary statements
P260 Do not breathe dust/fume/gas/mist/vapours/spray.	
P273 Avoid release to the environment.	
P280 Wear protective gloves/protective clothing/eye protection/face protection.	
Response	
P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.	
P308 + P313 IF exposed or concerned: Get medical advice/attention.	
Disposal	
P501 Dispose of contents/container to ...	
TEEL-1 (mg/m3)	
TEEL-2 (mg/m3)	19.9 ppm
TEEL-3 (mg/m3)	200 ppm

Ecotoxicity

Lowest median lethal concentration (LC50) on crustacean (mg/l)	6.68
Lowest median lethal concentration (LC50) on fishes (mg/l)	24.25
Highest no observed effect concentration (NOEC) on algae (mg/l)	3.2
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	2.6

NITROETHANE

UN Number: 2842 - CAS Number: 79-24-3

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number	2842
CAS number	79-24-3

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1100 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	75.07
Density of gas (kg/m ³)	3.35
Boiling Point (°C)	114
Melting Point (°C)	-90
Vapour Pressure (Pa)	2100 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	360
Flash Point (°C)	28
Lower explosivity limit (LEL) (volume %)	3.4
Upper explosivity limit (UEL) (volume %)	40

Behaviour at sea

Additional data

Colour	colourless
Odour	mild fruity
Standard behavior classification	S/SD

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	42
State	liquid
Temperature (°C)	ambient

Pressure (Pa)	ambient
Family name	nitro compounds
IMO class	3.3

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	No
Oxidizing agents	Yes
Reducing agents	Yes
Combustibles	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	0 - Not irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	SD - Sinker/Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

IDHL	1000
TLV-TWA	100
TEEL-1 (mg/m3)	100 ppm
TEEL-2 (mg/m3)	200 ppm
TEEL-3 (mg/m3)	1000 ppm

Ecotoxicity

NITROGEN (compressed gas)

UN Number: 1066

Also known as: AZOTE (gaz comprimé)

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1066

Physical chemical data

Physical State (20°C)	Gas
Density (kg/m ³)	1.161 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	28
Density of gas (kg/m ³)	1.161
Boiling Point (°C)	-195.4
Melting Point (°C)	-210
Vapour Pressure (Pa)	25000000 [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless

Transportation data

Transport mode	Gas, Packaged
Ship type	3G
State	liq.compr.gas
Temperature (°C)	-196
Pressure (Pa)	ambient
IMO class	2(2.2)

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m3)	65000 ppm
TEEL-2 (mg/m3)	230000 ppm
TEEL-3 (mg/m3)	400000 ppm

Ecotoxicity

NITROGEN (refrigerated liquid)

UN Number: 1977

Also known as: AZOTE (liquide réfrigéré)

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1977

Physical chemical data

Physical State (20°C)	Gas
Density (kg/m ³)	1.161 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	28
Density of gas (kg/m ³)	1.161
Boiling Point (°C)	-195.4
Melting Point (°C)	-210
Vapour Pressure (Pa)	25000000 [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless

Transportation data

Transport mode	Gas, Packaged
Ship type	3G
State	liquefied gas
Temperature (°C)	< -196
Pressure (Pa)	ambient
IMO class	2(2.2)

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m3)	65000 ppm
TEEL-2 (mg/m3)	230000 ppm
TEEL-3 (mg/m3)	400000 ppm

Ecotoxicity

NITROMETHANE

UN Number: 1261

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1261

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1139 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	61.04
Density of gas (kg/m ³)	2.709
Boiling Point (°C)	101.4
Melting Point (°C)	-29
Vapour Pressure (Pa)	3600 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	415
Flash Point (°C)	36
Lower explosivity limit (LEL) (volume %)	7.3

Behaviour at sea

Additional data

Colour	colourless
Odour	strong odour

Transportation data

Package group	II
Cargo group	43
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	miscell. water solut.
IMO class	3.3

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	No
Metal(s) and alloys	No
Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	Yes

GESAMP Hazard profile

Human toxicity threshold

IDHL	1000
TLV-TWA	100
TEEL-1 (mg/m3)	60 ppm
TEEL-2 (mg/m3)	750 ppm
TEEL-3 (mg/m3)	750 ppm

Ecotoxicity

NITROPHENOL

UN Number: 1663

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1663

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	1280 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	139.1
Boiling Point (°C)	214
Melting Point (°C)	45
Ignition Temperature (°C)	550
Flash Point (°C)	108

Behaviour at sea

Additional data

Colour	yellow
Odour	peculiar, aromatic odour
Standard behavior classification	SD

Transportation data

Package group	III
State	solid
Temperature (°C)	ambient
Pressure (Pa)	ambient
IMO class	6.1

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m3)	2.5
TEEL-2 (mg/m3)	15
TEEL-3 (mg/m3)	75

Ecotoxicity

NITROTOLUENES mix

UN Number: 1664

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1664

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1100/1200 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	137.13
Density of gas (kg/m ³)	6.06
Boiling Point (°C)	220/238
Melting Point (°C)	-0.192307692
Vapour Pressure (Pa)	34 [Pa] at a temperature of 20°C
Flash Point (°C)	95/100

Behaviour at sea

Additional data

Colour	yellow
Odour	characteristic

Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	42
State	liquid/solid
Temperature (°C)	ambient
Family name	nitro compounds
IMO class	6.1

Reactivity data

Water	No
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Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes
Reducing agents	Yes
Combustibles	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	2 - ≥ 2 and < 3
Bioaccumulation in BCF (A1B)	2 - ≥ 10 and < 100
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	1 - Low
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

IDHL 200

Ecotoxicity

NONANE

UN Number: 1920 - CAS Number: 111-84-2

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number	1920
CAS number	111-84-2

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	718 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	128.3
Density of gas (kg/m ³)	5.69
Boiling Point (°C)	150.7
Melting Point (°C)	-54
Vapour Pressure (Pa)	430 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	205
Flash Point (°C)	30
Lower explosivity limit (LEL) (volume %)	0.87
Upper explosivity limit (UEL) (volume %)	2.9

Behaviour at sea

Additional data

Colour	colourless
Odour	gasoline odour
Standard behavior classification	FE

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	31
State	liquid
Temperature (°C)	ambient

Pressure (Pa)	ambient
Family name	paraffins
IMO class	3.3

Reactivity data

Water	No
Static electricity	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	4 - ≥ 4 and < 5
Bioaccumulation (A1)	4 - High potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Specific Health Concern (D3)	A - Aspiration
Interference with coastal amenities (E2)	FE - Floater/Evaporator
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

TLV-TWA	200
TEEL-1 (mg/m3)	600 ppm
TEEL-2 (mg/m3)	1000 ppm
TEEL-3 (mg/m3)	1250 ppm

Ecotoxicity

NONANOIC ACID

CAS Number: 112-05-0

Also known as: ACIDE NONANOIQUE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 112-05-0

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	900 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	158.2
Boiling Point (°C)	255
Melting Point (°C)	12
Vapour Pressure (Pa)	< 10 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	405
Flash Point (°C)	114

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless
Standard behavior classification	FD

Transportation data

Family name organic acids

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes

Organic substance	Yes
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GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	3 - ≥ 3 and < 4
Bioaccumulation (A1)	3 - Moderate potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	F - Floating substance, not likely to evaporate or to dissolve quickly
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

Ecotoxicity

NONENE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	739 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	126.2
Density of gas (kg/m ³)	5.676
Boiling Point (°C)	135
Melting Point (°C)	-81
Vapour Pressure (Pa)	543 [Pa] at a temperature of 20°C
Flash Point (°C)	83
Lower explosivity limit (LEL) (volume %)	0.7
Upper explosivity limit (UEL) (volume %)	3.9

Behaviour at sea

Additional data

Colour	colourless
Odour	gasoline odour
Standard behavior classification	FE

Transportation data

Cargo group	30
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	olefins

Reactivity data

Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	4 - ≥ 4 and < 5
Bioaccumulation (A1)	4 - High potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	FE - Floater/Evaporator
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

NONYL PHENOL POLY(4-12)ETHOXYLATES

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Liquid/Solid
Density (kg/m ³)	1070 [Kg/m ³] at a temperature of 20°C
Melting Point (°C)	-0.714285714
Flash Point (°C)	> 205

Behaviour at sea

Additional data

Colour	colourless
Odour	mild
Standard behavior classification	D/DE

Transportation data

Reactivity data

Metal(s) and alloys	Yes (Al, Cu, Zn, Brass)
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GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	4 - ≥ 4 and < 5
Bioaccumulation (A1)	4 - High potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	1 - Low
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	D - Dissolver

Effects on wildlife and bottom habitats (E3)

2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

NONYLPHENOL

UN Number: 3082 - CAS Number: 25154-52-3

Also known as: 2,6-DIMETHYL-4-HEPTYL PHENOL, Monononylphenol, Phenol, Nonyl, Nonylphenol, N-Nonylphenol (Mixed Isomers), Nonylphenols

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	3082
CAS number	25154-52-3
Formula	C ₁₅ H ₂₄ O

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	949.4 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	2630 [cSt] at a temperature of 20°C
Molar mass (g/mol)	220.36
Density of gas (kg/m ³)	9.804
Solubility (g/L)	6 [g/L] at a temperature of 20°C and salinity of 0‰ 4 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	304
Melting Point (°C)	140
Interfacial tension (mN/m)	30 [mN/m] at a temperature of 20°C and salinity of 0‰
Vapour Pressure (Pa)	50 [Pa] at a temperature of 20°C 0.3 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	370
Flash Point (°C)	140
Flash Point (Pensky-Martens closed cup) (°C)	141
Flash Point (Cleveland open cup) (°C)	141
Combustion enthalpy (J/Kg)	38200000
Combustion efficiency (%)	70
Mass flow rate of the combustion surface (Kg/(m ² ·s))	0.036
Rad fraction (%)	30
Henry's constant (mol/(m ³ ·Pa))	11.02

Behaviour at sea

Log kow	4.48
Log koc	3.7
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Biodegradation in marine environment (Half-life) (days)	150
Bioconcentration factor (BCF)	1280

Additional data

Colour	light yellow, straw colour				
Odour	medicine odour				
MARPOL pollution category	<table><thead><tr><th>Category</th><th>Description</th></tr></thead><tbody><tr><td>X</td><td>Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a major hazard to either marine resources or human health and, therefore, justify the prohibition of the discharge into the marine environment.</td></tr></tbody></table>	Category	Description	X	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a major hazard to either marine resources or human health and, therefore, justify the prohibition of the discharge into the marine environment.
Category	Description				
X	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a major hazard to either marine resources or human health and, therefore, justify the prohibition of the discharge into the marine environment.				

Transportation data

Package group	II
Cargo group	40
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	glycol ethers

Reactivity data

Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	5 - ≥ 5 and \leq ca.7
Bioaccumulation in BCF (A1B)	4 - ≥ 500 and < 4000
Bioaccumulation (A1)	4 - High potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	5 - Very highly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	3 - High
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Skin irritation/corrosivity (D1)	1 - Mildly irritating

Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	FD - Floater/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TEEL-1 (mg/m3)	20
TEEL-2 (mg/m3)	125
TEEL-3 (mg/m3)	500

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	0.027
Lowest median lethal concentration (LC50) on crustacean (mg/l)	0.021
Lowest median lethal concentration (LC50) on fishes (mg/l)	0.017
Highest no observed effect concentration (NOEC) on algae (mg/l)	0.0251
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	0.0039
Highest no observed effect concentration (NOEC) on fishes (mg/l)	0.006
Assessment factor (AF)	10 on the short term 10 on the long term
Predicted No Effect Concentration (PNEC) (µg/l)	1.7 [µg/l] on the short term 0.39 [µg/l] on the long term

Nonylphenol Poly (4+)Ethoxylate

CAS Number: 9016-45-9

Also known as: Nonylphenoxy poly(Ethyleneoxy)Ethanol, Alpha-(Nonylphenyl)-Omega-Hydroxypoly(Oxy-1,2-Ethanediy), Nonylphenol Poly (4+)Ethoxylate, Poly (4+) Ethoxylate De Nonylphenol

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number	9016-45-9
Formula	$C_9H_{19}-C_6H_4O(CH_2CH_2O)_nH$

Physical chemical data

Physical State (25°C)	Liquid
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Behaviour at sea

Bioconcentration factor (BCF)	10
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Additional data

MARPOL pollution category	Category	Description
	Other Substances	Substances which have been evaluated and found to fall outside Category X, Y or Z because they are considered to present no harm to marine resources, human health, amenities or other legitimate uses of the sea when discharged into the sea from tank cleaning or deballasting operations. The discharge of bilge or ballast water or other residues or mixtures containing these substances are not subject to any requirements of MARPOL Annex II.

Transportation data

Reactivity data

GESAMP Hazard profile

Interference with coastal amenities (E2)	G - Gas
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Human toxicity threshold



Hazard statements

Health

- H315 Causes skin irritation.
H319 Causes serious eye irritation.

Environmental

- H411 Toxic to aquatic life with long lasting effects.
-

Precautionary statements

Prevention

- P264 Wash ... thoroughly after handling.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response

- P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P321 Specific treatment (see ... on this label).
P332 + P313 If skin irritation occurs: Get medical advice/attention.
P337 + P313 If eye irritation persists: Get medical advice/attention.
P362 Take off contaminated clothing and wash before reuse.
P391 Collect spillage.

Ecotoxicity

o-CHLORONITROBENZENE

UN Number: 1578 - CAS Number: 25167-93-5

Also known as: 1-CHLORO-2-NITROBENZENE, 2-CHLORONITROBENZENE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1578
CAS number	25167-93-5

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	1400 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	157.56
Density of gas (kg/m ³)	6.97
Boiling Point (°C)	246
Melting Point (°C)	32.5
Vapour Pressure (Pa)	600 [Pa] at a temperature of 20°C
Flash Point (°C)	124

Behaviour at sea

Additional data

Colour	yellow-green
Odour	aromatic

Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	42
State	solid
Temperature (°C)	cool
Family name	nitrocompounds
IMO class	6.1

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	Yes
Oxidizing agents	Yes
Reducing agents	Yes
Combustibles	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	2 - ≥ 2 and < 3
Bioaccumulation in BCF (A1B)	2 - ≥ 10 and < 100
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

o-CHLOROTOLUENE

UN Number: 2338 - CAS Number: 95-49-8

Also known as: 2-CHLORO-1-METHYLBENZENE, 2-CHLOROTOLUENE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2338
CAS number	95-49-8

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1080 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	126.59
Boiling Point (°C)	157/159
Melting Point (°C)	1.058823529
Vapour Pressure (Pa)	359 [Pa] at a temperature of 20°C
Flash Point (°C)	46/47

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	36
State	liquid
Family name	halogenated hydrocarbons
IMO class	3.3

Reactivity data

Water	No
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	3 - ≥ 3 and < 4
Bioaccumulation in BCF (A1B)	3 - ≥ 100 and < 500
Bioaccumulation (A1)	3 - Moderate potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	1 - Low
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly
Effects on wildlife and bottom habitats (E3)	1 - Is a floater; and/or is slightly acutely toxic; and/or is mildly irritant to skin and/or eyes

Human toxicity threshold

Ecotoxicity

o-ETHYLPHENOL

CAS Number: 90-00-6

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 90-00-6

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1037 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	122.17
Density of gas (kg/m ³)	5.43
Boiling Point (°C)	195/197
Melting Point (°C)	-18
Vapour Pressure (Pa)	< 130 [Pa] at a temperature of 20°C
Flash Point (°C)	78

Behaviour at sea

Additional data

Colour	yellow
Odour	odourless

Transportation data

Cargo group	21
State	liquid
Temperature (°C)	ambient
Family name	phenols, cresols

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	2 - ≥ 2 and < 3
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly

Human toxicity threshold

Ecotoxicity

OCTANE

UN Number: 1262 - CAS Number: 111-65-9

Also known as: N-Octane, Octane

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1262
CAS number	111-65-9
Formula	C ₈ H ₁₈

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	703 [Kg/m ³] at a temperature of 20°C 698.6 [Kg/m ³] at a temperature of 25°C
Molar mass (g/mol)	114.2
Density of gas (kg/m ³)	5.792
Solubility (g/L)	0.66 [g/L] at a temperature of 20°C and salinity of 0‰ 0.66 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	125.9
Melting Point (°C)	-16
Critical molar volume (m ³ /mol)	0.000492
Critical temperature (°C)	568.7
Critical pressure (Pa)	2490000
Surface tension (mN/m)	21.62 [mN/m] at a temperature of 20°C 21.14 [mN/m] at a temperature of 25°C
Vapour Pressure (Pa)	1306 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	210
Flash Point (°C)	81
Flash Point (Pensky-Martens closed cup) (°C)	13
Flash Point (Cleveland open cup) (°C)	22
Lower explosivity limit (LEL) (volume %)	1
Upper explosivity limit (UEL) (volume %)	6.5

Vapor enthalpy (J/Kg)	301237 [J/Kg] at a temperature of 126°C 363310 [J/Kg] at a temperature of 25°C
Combustion enthalpy (J/Kg)	47715549
Specific heat capacity (J/(Kg·K))	2229
Henry's constant (mol/(m ³ ·Pa))	324240

Behaviour at sea

Log K _{ow}	5.18
Log K _{oc}	2.64
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Bioconcentration factor (BCF)	1200

Additional data

Colour	colourless				
Odour	gasoline odour				
MARPOL pollution category	<table border="1"> <thead> <tr> <th>Category</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>X</td> <td>Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a major hazard to either marine resources or human health and, therefore, justify the prohibition of the discharge into the marine environment.</td> </tr> </tbody> </table>	Category	Description	X	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a major hazard to either marine resources or human health and, therefore, justify the prohibition of the discharge into the marine environment.
Category	Description				
X	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a major hazard to either marine resources or human health and, therefore, justify the prohibition of the discharge into the marine environment.				
Standard behavior classification	FE				

Transportation data

Package group	II
Cargo group	31
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	paraffins
IMO class	3.2

Reactivity data

Water	No
Static electricity	Yes

GESAMP Hazard profile

Bioaccumulation in logP _{ow} (A1A)	5 - ≥5 and ≤ ca.7
Bioaccumulation (A1)	5 - Very high potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic

Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	0 - Not irritating
Eye irritation/corrosivity (D2)	0 - Not irritating
Specific Health Concern (D3)	A - Aspiration
Interference with coastal amenities (E2)	FE - Floater/Evaporator
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold



IDHL	5000
Hazard statements	<p>Physical</p> <p>H225 Highly flammable liquid and vapour.</p> <p>Health</p> <p>H304 May be fatal if swallowed and enters airways.</p> <p>H315 Causes skin irritation.</p> <p>H336 May cause drowsiness or dizziness.</p> <p>Environmental</p> <p>H410 Very toxic to aquatic life with long lasting effects.</p>
Precautionary statements	<p>Prevention</p> <p>P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.</p> <p>P241 Use explosion-proof electrical/ventilating/lighting/.../equipment.</p> <p>Response</p> <p>P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.</p> <p>P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.</p> <p>Storage</p> <p>P405 Store locked up.</p> <p>Disposal</p> <p>P501 Dispose of contents/container to ...</p>
TLV-TWA	300
TEEL-1 (mg/m3)	300 ppm
TEEL-2 (mg/m3)	385 ppm
TEEL-3 (mg/m3)	1000 ppm

Ecotoxicity

Lowest median lethal concentration (LC50) on crustacean (mg/l)	0.38
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	0.17
Assessment factor (AF)	1 on the short term
Predicted No Effect Concentration (PNEC) (µg/l)	10 [µg/l] on the short term

OCTANOIC ACID

CAS Number: 134-07-2

Also known as: C-8 ACID, ACIDE OCTANOIQUE, n-CAPRYLIC ACID

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 134-07-2

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	910 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	144.21
Density of gas (kg/m ³)	6.45
Boiling Point (°C)	237
Melting Point (°C)	16
Flash Point (°C)	110

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless

Transportation data

Temperature (°C)	ambient
Family name	organic acids

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	Yes
Oxidizing agents	Yes

Organic substance	Yes
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GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	3 - ≥ 3 and < 4
Bioaccumulation (A1)	3 - Moderate potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	F - Floating substance, not likely to evaporate or to dissolve quickly
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

Ecotoxicity

OCTANOL

UN Number: 3082 - CAS Number: 111-87-5

Also known as: ALCOHOL C-8, ALFOL 8, CAPRYL ALCOHOL, n-CAPRYLIC ALCOHOL, DYTOL M-83

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	3082
CAS number	111-87-5

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	829 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	130.23
Density of gas (kg/m ³)	5.805
Boiling Point (°C)	195
Melting Point (°C)	-16
Vapour Pressure (Pa)	20260 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	270
Flash Point (°C)	81
Lower explosivity limit (LEL) (volume %)	1.1
Upper explosivity limit (UEL) (volume %)	7.4

Behaviour at sea

Additional data

Colour	colourless
Odour	sweet odour

Transportation data

State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient

Reactivity data

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	3 - ≥ 3 and < 4
Bioaccumulation (A1)	3 - Moderate potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	Fp - Persistent slick forming substance
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

OCTYL ACETATE

Also known as: ACETATE D'OCTYLE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Density (kg/m ³)	868 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	172.26
Boiling Point (°C)	211
Flash Point (°C)	86

Behaviour at sea

Additional data

Transportation data

Cargo group	34
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Reactivity data

Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	3 - ≥ 3 and < 4
Bioaccumulation (A1)	3 - Moderate potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Interference with coastal amenities (E2)	FD - Floater/Dissolver

Human toxicity threshold

Ecotoxicity

OCTYL ALDEHYDES

UN Number: 1191

Also known as: ALDEHYDES OCTYLIQUES

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1191

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	825 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	128.22
Boiling Point (°C)	163
Melting Point (°C)	-85
Vapour Pressure (Pa)	200000 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	180
Flash Point (°C)	52
Lower explosivity limit (LEL) (volume %)	0.85
Upper explosivity limit (UEL) (volume %)	7.2

Behaviour at sea

Additional data

Colour	colourless
Odour	strong fruity

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	19
Temperature (°C)	ambient
Family name	aldehydes
IMO class	3.3

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m3)	60
TEEL-2 (mg/m3)	500
TEEL-3 (mg/m3)	500

Ecotoxicity

OLEIC ACID

CAS Number: 112-80-1

Also known as: ACIDE OLEIQUE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 112-80-1

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	890 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	277
Boiling Point (°C)	222
Melting Point (°C)	13.4
Ignition Temperature (°C)	363
Flash Point (°C)	189

Behaviour at sea

Additional data

Colour	colourless to pale yellow
Odour	mild odour

Transportation data

State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient

Reactivity data

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
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Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	Fp - Persistent slick forming substance
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

TEEL-1 (mg/m3)	0.05
TEEL-2 (mg/m3)	0.4
TEEL-3 (mg/m3)	500

Ecotoxicity

OLEUM (20-65% free SO₃)

UN Number: 1831

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1831

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1920/1990 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	80.1 (pure)
Density of gas (kg/m ³)	3.48
Boiling Point (°C)	55/139
Vapour Pressure (Pa)	900 [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Colour	colourless to brown
Odour	pungent, sharp, choking

Transportation data

Transport mode	Bulk, Packaged
State	liquid
Temperature (°C)	ambient

Reactivity data

Water	Yes
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	Yes (cast iron)
Oxidizing agents	Yes
Reducing agents	Yes
Combustibles	Yes

Organic substance Yes

GESAMP Hazard profile

Skin irritation/corrosivity (D1) 3C - Corrosive

Human toxicity threshold

IDHL 15 mg/m3

TLV-TWA 1 mg/m3

ERPG-2 (ppm) 10

ERPG-3 (ppm) 30

Ecotoxicity

OXALIC ACID

Also known as: ACIDE OXALIQUE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	1700 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	126.07
Density of gas (kg/m ³)	5.676
Boiling Point (°C)	157
Melting Point (°C)	102

Behaviour at sea

Additional data

Colour	white
Odour	odourless

Transportation data

State	solid
Temperature (°C)	ambient
Pressure (Pa)	ambient

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

IDHL	90
TLV-TWA	0.2
TEEL-2 (mg/m ³)	40

Ecotoxicity

Palm Oil

CAS Number: 8002-75-3

Also known as: Palm Oil, Huile De Palme

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 8002-75-3

Physical chemical data

Physical State (25°C)	Solid
Mixed	Yes
Solubility (g/L)	0 [g/L] at a temperature of 20°C and salinity of 0‰ 0 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	338
Melting Point (°C)	27
Flash Point (Pensky-Martens closed cup) (°C)	162

Behaviour at sea

Log kow	22.52
Log koc	10
Biodegradation in estuary environment (Half-life) (days)	552

Additional data

MARPOL pollution category	Category	Description
	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.

Transportation data

Reactivity data

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	ED - Evaporator/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

Ecotoxicity

PARAFFIN WAX

CAS Number: 8002-74-2

Also known as: CIRE DE PARAFFINE, CIRES DE PARAFFINES

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

CAS number 8002-74-2

Physical chemical data

Physical State (20°C)	Liquid/Solid
Density (kg/m ³)	850/900 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	410
Density of gas (kg/m ³)	51.85
Boiling Point (°C)	370
Melting Point (°C)	15/90
Vapour Pressure (Pa)	< 100 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	> 245
Flash Point (°C)	110

Behaviour at sea

Additional data

Colour	white to yellow
Odour	waxy

Transportation data

Package group	III
Cargo group	31
State	liquid/solid
Temperature (°C)	ambient
Family name	paraffins
IMO class	3.3

Reactivity data

Water	No
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	Fp - Persistent slick forming substance
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

PARALDEHYDE

UN Number: 1264 - CAS Number: 123-63-7

Also known as: p-ACETALDEHYDE

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number	1264
CAS number	123-63-7

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	990 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	132.16
Density of gas (kg/m ³)	5.93
Boiling Point (°C)	124
Melting Point (°C)	12
Vapour Pressure (Pa)	3330 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	235
Flash Point (°C)	17
Lower explosivity limit (LEL) (volume %)	1.3

Behaviour at sea

Additional data

Colour	colourless
Odour	aromatic

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	19
State	liquid
Temperature (°C)	ambient

Family name	aldehydes
IMO class	3.3

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - $e < 1$, or $> ca. 7$, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TEEL-1 (mg/m3)	30
TEEL-2 (mg/m3)	50
TEEL-3 (mg/m3)	500

Ecotoxicity

PARATHION liquid

UN Number: 3018

Also known as: APHAMITE, BLADAN, COROTHION, DANATHION, DNTP

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 3018

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1269 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	291.3
Boiling Point (°C)	375
Flash Point (°C)	120

Behaviour at sea

Persistence (days) 3.1

Additional data

Colour	light to dark brown
Odour	characteristic odour
Marine pollutant	P

Transportation data

Transport mode	Bulk, Packaged
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	under pressure
IMO class	6.1

Reactivity data

Water	Yes
Acid(s)	No

Base(s)	No
Metal(s) and alloys	No
Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

IDHL	1.5
TLV-TWA	0.008
TEEL-1 (mg/m3)	0.15
TEEL-3 (mg/m3)	10

Ecotoxicity

PENTACHLOROETHANE

UN Number: 1669 - CAS Number: 76-01-7

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1669
CAS number	76-01-7

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1673 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	202.3
Density of gas (kg/m ³)	9.03
Boiling Point (°C)	160.5
Melting Point (°C)	-22
Vapour Pressure (Pa)	453 (25C) [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Colour	colourless
Odour	sweet, chloroform-like

Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	36
State	liquid
Family name	halogenated hydrocarbons
IMO class	6.1

Reactivity data

Water	No
Base(s)	Yes

Metal(s) and alloys	Yes
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GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	3 - ≥ 3 and < 4
Bioaccumulation in BCF (A1B)	2 - ≥ 10 and < 100
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	1 - Low
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TEEL-1 (mg/m3)	30
TEEL-2 (mg/m3)	500
TEEL-3 (mg/m3)	500

Ecotoxicity

PENTACHLOROPHENOL

UN Number: 3155

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 3155

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	1980 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	266.35
Boiling Point (°C)	310
Melting Point (°C)	188
Vapour Pressure (Pa)	20 [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Colour	white to light brown
Odour	odourless
Marine pollutant	P

Transportation data

Package group	II
State	solid
Temperature (°C)	ambient
IMO class	6.1

Reactivity data

Water No

GESAMP Hazard profile

Human toxicity threshold

IDHL	0.225
TLV-TWA	0.045
TEEL-1 (mg/m3)	2.5
TEEL-2 (mg/m3)	2.5
TEEL-3 (mg/m3)	2.5

Ecotoxicity

PENTAETHYLENEHEXAMINE

CAS Number: 4067-16-7

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 4067-16-7

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1000 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	232.38
Boiling Point (°C)	350/390
Ignition Temperature (°C)	360
Flash Point (°C)	175/207

Behaviour at sea

Additional data

Colour	yellowish
Odour	ammonia-like
Standard behavior classification	D/DE

Transportation data

Temperature (°C)	ambient
Family name	aliphatic amines

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
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Bioaccumulation (A1)	0 - No potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

Ecotoxicity

PENTANOIC ACID

CAS Number: 109-52-4

Also known as: ACIDE PENTANOIQUE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 109-52-4

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	939 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	102.13
Boiling Point (°C)	185
Melting Point (°C)	-18
Vapour Pressure (Pa)	21 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	400
Flash Point (°C)	96
Lower explosivity limit (LEL) (volume %)	1.6
Upper explosivity limit (UEL) (volume %)	7.6

Behaviour at sea

Additional data

Colour	colourless
Odour	unpleasant

Transportation data

State	liquid
Temperature (°C)	ambient
Family name	organic acids

Reactivity data

Water	Yes
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Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Skin irritation/corrosivity (D1)	3 - Corrosive
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	FD - Floater/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

Ecotoxicity

PERCHLOROETHYLENE

UN Number: 1897 - CAS Number: 127-18-4

Also known as: Ethylene Tetrachloride, Pce, Perc, Perchlor, Perchlorethylene, Perchloroethylene, Perk, Tetrachloroethene, Tetrachlorethylene, 1,1,2,2-Tetrachloroethylene, Tetrachloroethylene

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1897
CAS number	127-18-4
Formula	C ₂ Cl ₄

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	1620 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	0.54 [cSt] at a temperature of 20°C 0.52 [cSt] at a temperature of 25°C
Molar mass (g/mol)	165.83
Density of gas (kg/m ³)	7.4
Solubility (g/L)	149 [g/L] at a temperature of 20°C and salinity of 0‰ 209 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	121
Melting Point (°C)	-23
Surface tension (mN/m)	32.1 [mN/m] at a temperature of 20°C
Interfacial tension (mN/m)	44.4 [mN/m] at a temperature of 25°C and salinity of 0‰
Vapour Pressure (Pa)	1900 [Pa] at a temperature of 20°C 2481 [Pa] at a temperature of 25°C
Vapor enthalpy (J/Kg)	209105 [J/Kg] at a temperature of 121.2°C 23952 [J/Kg] at a temperature of 25°C
Combust enthalpy (J/Kg)	4440000
Specific heat capacity (J/(Kg·K))	864.64
Combustion efficiency (%)	50
Mass flow rate of the combustion surface (Kg/(m ² ·s))	0.03
Rad fraction (%)	40

Henry's constant (mol/(m ³ ·Pa))	2114
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Behaviour at sea

Log kow	2.53
Log koc	1.98
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	270
Biodegradation in marine environment (Half-life) (days)	Not biodegradable
Bioconcentration factor (BCF)	103

Additional data

Colour	colourless
Odour	sweet

MARPOL pollution category	Category	Description
	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	36
State	liquid
Family name	halogenated hydrocarbons
IMO class	6.1

Reactivity data

Water	Yes
Acid(s)	No
Base(s)	No
Metal(s) and alloys	No
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	2 - ≥2 and <3
Bioaccumulation in BCF (A1B)	2 - ≥10 and <100
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable

Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	SD - Sinker/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



IDHL	150
Hazard statements	Health
	H335 May cause respiratory irritation.
Precautionary statements	Environmental
	H411 Toxic to aquatic life with long lasting effects.
Precautionary statements	Prevention
	P202 Do not handle until all safety precautions have been read and understood.
	P273 Avoid release to the environment.
	P281 Use personal protective equipment as required.
	Response
	P308 + P313 IF exposed or concerned: Get medical advice/attention.
	P391 Collect spillage.
	Storage
	P405 Store locked up.
	Disposal
P501 Dispose of contents/container to ...	
TLV-TWA	50
ERPG-1 (ppm)	100
ERPG-2 (ppm)	200
ERPG-3 (ppm)	1000

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	3.64
Lowest median lethal concentration (LC50) on crustacean (mg/l)	8.5
Lowest median lethal concentration (LC50) on fishes (mg/l)	5

Highest no observed effect concentration (NOEC) on algae (mg/l)	1.77
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	0.51
Highest no observed effect concentration (NOEC) on fishes (mg/l)	1.99
Assessment factor (AF)	100 on the short term 100 on the long term
Predicted No Effect Concentration (PNEC) (µg/l)	36.4 [µg/l] on the short term 5.1 [µg/l] on the long term

PERMETHRIN

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1920 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	391.28
Boiling Point (°C)	200 (1.33 Pa)
Melting Point (°C)	34/35
Vapour Pressure (Pa)	0.000045 [Pa] at a temperature of 20°C
Flash Point (°C)	> 100

Behaviour at sea

Additional data

Colour pale brown

Transportation data

Reactivity data

Water No

GESAMP Hazard profile

Human toxicity threshold

Ecotoxicity

PETROLATUM

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	900 [Kg/m ³] at a temperature of 20°C
Boiling Point (°C)	302
Melting Point (°C)	36-60
Vapour Pressure (Pa)	<1.3 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	>290
Flash Point (°C)	182/221
Lower explosivity limit (LEL) (volume %)	0.9

Behaviour at sea

Additional data

Colour	green, dark brown
Odour	odourless
Standard behavior classification	F/FE/E

Transportation data

Cargo group	33
State	solid
Family name	miscell. hydroc. mixt

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m3)	50
TEEL-2 (mg/m3)	350
TEEL-3 (mg/m3)	500

Ecotoxicity

PETROLEUM DISTILLATES (flashed feed stocks)

UN Number: 1268

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1268

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	760 [Kg/m ³] at a temperature of 20°C
Boiling Point (°C)	75
Vapour Pressure (Pa)	400 [Pa] at a temperature of 20°C
Flash Point (°C)	-18

Behaviour at sea

Additional data

Colour	colourless
Odour	gasoline odour

Transportation data

Transport mode	Bulk, Packaged
Cargo group	33
State	liquid
Temperature (°C)	ambient
Family name	miscell. hydroc. mixt
IMO class	3.1/3.2/3.

Reactivity data

Acid(s)	Yes
Static electricity	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Human toxicity threshold

IDHL	10000
TLV-TWA	400

Ecotoxicity

PETROLEUM OIL

UN Number: 1270

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1270

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	841 [Kg/m ³] at a temperature of 20°C
Boiling Point (°C)	288
Vapour Pressure (Pa)	400 [Pa] at a temperature of 20°C
Flash Point (°C)	-18
Lower explosivity limit (LEL) (volume %)	1.3

Behaviour at sea

Additional data

Colour	yellow-brown
Odour	gasoline odour
Standard behavior classification	E, FE, F

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	33
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	miscell. hydroc. mixt
IMO class	3.1/3.2/3.

Reactivity data

Acid(s)	Yes
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Oxidizing agents

Yes

GESAMP Hazard profile

Human toxicity threshold

Ecotoxicity

PHENOL

UN Number: 1671 - CAS Number: 108-95-2

Also known as: ACID CARBOLIC, BAKER P & S LIQUID OINTMENT, BENZENOL, CARBOLIC ACID, CARBOLSÄURE, Hydroxybenzene, Monohydroxybenzene, Oxybenzene, Phenic Acid, Phenyl Alcohol, Phenylic Acid, Phenylic Alcohol, Phenyl Hydrate, Phenyl Hydroxide, Acide Carbolique, Phenol

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1671
CAS number	108-95-2
Formula	C ₆ H ₆ O

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Solid
Density (kg/m ³)	1058 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	3.26 [cSt] at a temperature of 20°C
Molar mass (g/mol)	94.11
Density of gas (kg/m ³)	4.18
Solubility (g/L)	84000 [g/L] at a temperature of 20°C and salinity of 0‰ 86600 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	182
Melting Point (°C)	41
Vapour Pressure (Pa)	35455 [Pa] at a temperature of 20°C 46.6 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	605
Flash Point (°C)	79
Flash Point (Pensky-Martens closed cup) (°C)	79
Flash Point (Cleveland open cup) (°C)	85
Lower explosivity limit (LEL) (volume %)	1.7
Upper explosivity limit (UEL) (volume %)	8.6
Vapor enthalpy (J/Kg)	485496 [J/Kg] at a temperature of 181.8°C 614387 [J/Kg] at a temperature of 25°C
Combustion enthalpy (J/Kg)	31000000

Specific heat capacity (J/(Kg·K))	2123
Combustion efficiency (%)	89
Mass flow rate of the combustion surface (Kg/(m ² ·s))	0.04
Rad fraction (%)	33
Henry's constant (mol/(m ³ ·Pa))	0.02

Behaviour at sea

Log kow	1.47
Log koc	1.59
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Biodegradation in marine environment (Half-life) (days)	50
Bioconcentration factor (BCF)	17.5

Additional data

Colour	white, light pink
Odour	sweet, tar odour

MARPOL pollution category	Category	Description
	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.

Standard behavior classification	DE
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Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	21
State	solid
Temperature (°C)	ambient
Pressure (Pa)	under pressure
Family name	phenols, cresols
IMO class	6.1

Reactivity data

Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation in BCF (A1B)	2 - ≥ 10 and < 100
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Skin irritation/corrosivity (D1)	3 - Corrosive
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



IDHL	250
Hazard statements	Health
	H301 Toxic if swallowed.
	H311 Toxic in contact with skin.
	H314 Causes severe skin burns and eye damage.
	H331 Toxic if inhaled.
	H341 Suspected of causing genetic defects.
	H373 May cause damage to organs through prolonged or repeated exposure, exposure cause the hazard:

Precautionary statements	Prevention
	P201 Obtain special instructions before use.
	P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
	P280 Wear protective gloves/protective clothing/eye protection/face protection.
	Response
	P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
	P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
	P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P308 + P313 IF exposed or concerned: Get medical advice/attention.
	P331 Do NOT induce vomiting.

ERPG-1 (ppm)	10
ERPG-2 (ppm)	50
ERPG-3 (ppm)	200

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	49.6
Lowest median lethal concentration (LC50) on crustacean (mg/l)	3.1
Lowest median lethal concentration (LC50) on fishes (mg/l)	5
Highest no observed effect concentration (NOEC) on algae (mg/l)	13
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	0.46
Highest no observed effect concentration (NOEC) on fishes (mg/l)	0.077
Assessment factor (AF)	100 on the short term 100 on the long term
Predicted No Effect Concentration (PNEC) (µg/l)	31 [µg/l] on the short term 0.77 [µg/l] on the long term

PHENOL molten

UN Number: 2312 - CAS Number: 108-95-2

Also known as: CARBOLIC ACID

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number	2312
CAS number	108-95-2

Physical chemical data

Physical State (20°C)	Liquid/Solid
Density (kg/m ³)	1070 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	94.11
Density of gas (kg/m ³)	4.21
Boiling Point (°C)	182
Melting Point (°C)	15/41
Vapour Pressure (Pa)	100 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	605
Flash Point (°C)	79
Lower explosivity limit (LEL) (volume %)	1.4
Upper explosivity limit (UEL) (volume %)	8.6

Behaviour at sea

Additional data

Colour	white to pink
Odour	sweet, tarry

Transportation data

Package group	II
Cargo group	21
Family name	phenols, cresols
IMO class	6.1

Reactivity data

Water	Yes
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	Yes
Oxidizing agents	Yes
Combustibles	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation in BCF (A1B)	2 - ≥ 10 and < 100
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

IDHL	250
ERPG-1 (ppm)	10
ERPG-2 (ppm)	50
ERPG-3 (ppm)	200

Ecotoxicity

PHOSGENE

UN Number: 1076

Also known as: CARBONIC CHLORIDE, CARBON OXYCHLORIDE, CARBONYL CHLORIDE, CHLOROFORMYL CHLORIDE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1076

Physical chemical data

Physical State (20°C)	Gas
Density (kg/m ³)	4.4 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	98.9
Melting Point (°C)	-13
Vapour Pressure (Pa)	160000 [Pa] at a temperature of 20°C
Flash Point (°C)	999

Behaviour at sea

Additional data

Transportation data

IMO class 2(2.3)

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

TLV-TWA	0.1				
ERPG-2 (ppm)	0.2				
	10 min	30 min	60 min	4 hrs	8 hrs

AEGL-2 (ppm)	0.6	0.6	0.3	0.08	0.04
AEGL-3 (ppm)	3.6	1.5	0.75	0.2	0.09

Ecotoxicity

PHOSPHINE

UN Number: 2199

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 2199

Physical chemical data

Physical State (20°C)	Gas
Density (kg/m ³)	1.5 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	34
Boiling Point (°C)	-87.7
Melting Point (°C)	-133
Vapour Pressure (Pa)	4200000 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	38
Flash Point (°C)	999
Lower explosivity limit (LEL) (volume %)	1.8

Behaviour at sea

Additional data

Transportation data

IMO class 2(2.3)

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

IDHL	200
TLV-TWA	0.3
ERPG-2 (ppm)	0.5

	10 min	30 min	60 min	4 hrs	8 hrs
AEGL-2 (ppm)				0.5	0.25
AEGL-3 (ppm)	7.2	7.2	3.6	0.9	0.45

Ecotoxicity

PHOSPHORIC ACID liquid

UN Number: 1805 - CAS Number: 7664-38-2

Also known as: ACIDE PHOSPHORIQUE liquide, Orthophosphoric Acid, O-Phosphoric Acid, White Phosphoric Acid, Phosphoric Acid, Hydrogen Phosphate, Acide Phosphorique

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1805
CAS number	7664-38-2
Formula	H ₃ PO ₄

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	1892 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	140 [cSt] at a temperature of 20°C 100 [cSt] at a temperature of 25°C
Molar mass (g/mol)	98
Solubility (g/L)	1863000 [g/L] at a temperature of 20°C and salinity of 0‰ 1863000 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	130
Melting Point (°C)	42
Specific heat capacity (J/(Kg·K))	1480
Henry's constant (mol/(m ³ ·Pa))	0

Behaviour at sea

Log kow	0.21
Log koc	1.21
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	1
Biodegradation in marine environment (Half-life) (days)	Not biodegradable

Additional data

Colour	colourless
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Odour	odourless
MARPOL pollution category	Category Description
	Z Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment.

Transportation data

Transport mode	Bulk, Packaged
Package group	III
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	non-oxid. min. acids

Reactivity data

Water	Yes
Abilities	Miscible in water.
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	Yes
Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	Yes
Notable risks	Reacts to heat Reacts with other compounds.

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	3 - Moderately high
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	3 - Moderately high
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



IDHL	2500
Hazard statements	Health
	H314 Causes severe skin burns and eye damage.
Precautionary statements	Prevention
	P280 Wear protective gloves/protective clothing/eye protection/face protection.
	Response
	P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
	P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
TLV-TWA	0.25
TEEL-2 (mg/m3)	500
TEEL-3 (mg/m3)	500

Ecotoxicity

Highest no observed effect concentration (NOEC) on algae (mg/l)	100
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	56

PHOSPHORUS (white, molten)

UN Number: 2447 - CAS Number: 7732-14-0

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2447
CAS number	7732-14-0

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	1800 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	123.89
Density of gas (kg/m ³)	5.676
Boiling Point (°C)	279.9
Melting Point (°C)	44
Vapour Pressure (Pa)	130 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	30
Flash Point (°C)	30

Behaviour at sea

Additional data

Colour	light yellow
Odour	garlic odour
Marine pollutant	P

Transportation data

Transport mode	Bulk, Packaged
State	liquid, wax
Temperature (°C)	elevated
Pressure (Pa)	under pressure
IMO class	4.2

Reactivity data

Water	No
Acid(s)	No
Base(s)	No
Metal(s) and alloys	No
Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Bioaccumulation in BCF (A1B)	3 - ≥ 100 and < 500
Bioaccumulation (A1)	3 - Moderate potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	6 - Extremely toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	4 - Very high
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

TLV-TWA	0.02
TEEL-1 (mg/m3)	0.125
TEEL-2 (mg/m3)	0.75

Ecotoxicity

PHOSPHORUS OXYCHLORIDE

UN Number: 1810

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1810

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1675 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	153.33
Density of gas (kg/m ³)	6.837
Boiling Point (°C)	107
Vapour Pressure (Pa)	3700 [Pa] at a temperature of 20°C
Upper explosivity limit (UEL) (volume %)	12.4


Behaviour at sea

Persistence (days) 1.6

Additional data

Colour	colourless to light yellow
Odour	musty odour
Standard behavior classification	D, SD

Transportation data

Package group	II
State	liquid
Temperature (°C)	> 2 
Pressure (Pa)	under pressure

Reactivity data

Water	Yes
Acid(s)	No
Base(s)	No

Metal(s) and alloys	Yes
Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

TLV-TWA	0.5
TEEL-1 (mg/m3)	0.479 ppm
TEEL-2 (mg/m3)	0.479 ppm
TEEL-3 (mg/m3)	0.85

Ecotoxicity

PHOSPHORUS TRICHLORIDE

UN Number: 1809

Also known as: CHLORIDE OF PHOSPHORUS

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1809

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1575 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	137.33
Density of gas (kg/m ³)	6.192
Boiling Point (°C)	76
Melting Point (°C)	-91
Vapour Pressure (Pa)	12700 [Pa] at a temperature of 20°C

Behaviour at sea

Persistence (days) 1.6

Additional data

Colour	colourless to light yellow
Odour	sharp, irritating odour
Standard behavior classification	DE, SD

Transportation data

Package group	II
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	under pressure
IMO class	6.1

Reactivity data

Water	Yes
Acid(s)	No
Base(s)	No
Metal(s) and alloys	No
Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

IDHL	50
TLV-TWA	0.2
ERPG-1 (ppm)	0.5
ERPG-3 (ppm)	15

Ecotoxicity

PHTHALIC ANHYDRIDE molten

UN Number: 2214 - CAS Number: 85-44-9

Also known as: ANHYDRIDE PHTALIQUE fondu, 1,2-BENZENE DICARBOXYLIC ACID ANHYDRIDE, 1,3-DIOXOPHTHALAN

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2214
CAS number	85-44-9

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	1500 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	148.12
Density of gas (kg/m ³)	6.708
Boiling Point (°C)	284.4
Melting Point (°C)	132
Ignition Temperature (°C)	580
Flash Point (°C)	140
Lower explosivity limit (LEL) (volume %)	1.7
Upper explosivity limit (UEL) (volume %)	10.4

Behaviour at sea

Persistence (days)	1.9
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Additional data

Colour	colourless to pale yellow
Odour	choking odour

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	11

State	liquid
Temperature (°C)	131 - 160
Pressure (Pa)	ambient
Family name	organic anhydrides

Reactivity data

Water	Yes
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	No
Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

IDHL	1600
TEEL-1 (mg/m3)	12
TEEL-2 (mg/m3)	40
TEEL-3 (mg/m3)	60

Ecotoxicity

POLYBUTENE

CAS Number: 9003-29-6

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 9003-29-6

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	960 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	225
Vapour Pressure (Pa)	400 [Pa] at a temperature of 20°C
Flash Point (°C)	215

Behaviour at sea

Additional data

Standard behavior classification E, FE, F

Transportation data

Cargo group	30
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	olefins

Reactivity data

Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable

Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	0 - Not irritating
Eye irritation/corrosivity (D2)	0 - Not irritating
Interference with coastal amenities (E2)	Fp - Persistent slick forming substance
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

POLYCHLORINATED BIPHENYLS

UN Number: 2315

Also known as: AROCHLOR, BIPHENYLES POLYCHLORES, CHLOPHREN (T), CHLOREXTOL (T), DYKANOL

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number 2315

Physical chemical data

Physical State (20°C)	Solid/Liquid
Density (kg/m ³)	1300/1800 (liq) [Kg/m ³] at a temperature of 20°C
Boiling Point (°C)	very high
Flash Point (°C)	> 141

Behaviour at sea

Additional data

Colour	white (S), yellow (L)
Odour	weak
Marine pollutant	P

Transportation data

Package group	II
State	liquid/solid
Temperature (°C)	ambient
Pressure (Pa)	ambient

Reactivity data

Water No

GESAMP Hazard profile

Human toxicity threshold

Ecotoxicity

POLYMETHYLENE POLYPHENYL ISOCYANATE

UN Number: 2206 - CAS Number: 9016-87-9

Also known as: 4,4'-Mdi, 1,1'- Methylenebis(4-Isocyanatobenzene), Methylene Bis (4-Phenyl Isocyanate), Diphenylmethane Diisocyanate, 4,4'- Diisocyanate De Diphenylmethane, Polymethylene Polyphenyl Isocyanate, Polyphenyl Isocyanates De Polymethylene

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2206
CAS number	9016-87-9
Formula	$[\text{C}_6\text{H}_3(\text{NCO})\text{CH}_2]_n$

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	1200 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	400
Boiling Point (°C)	200
Melting Point (°C)	41
Vapour Pressure (Pa)	10100 [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Colour	dark brown
Odour	weak odour

MARPOL pollution category	Category	Description
	Other Substances	Substances which have been evaluated and found to fall outside Category X, Y or Z because they are considered to present no harm to marine resources, human health, amenities or other legitimate uses of the sea when discharged into the sea from tank cleaning of deballasting operations. The discharge of bilge or ballast water or other residues or mixtures containing these substances are not subject to any requirements of MARPOL Annex II.
Standard behavior classification	D, DE, SD	

Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	12
State	liquid
Temperature (°C)	2❖ - 52❖
Pressure (Pa)	under pressure
Family name	isocyanates
IMO class	6.1

Reactivity data

Water	Yes
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	No
Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in BCF (A1B)	2 - ≥10 and <100
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic

Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold



Hazard statements	Health	
	H315 Causes skin irritation.	
	H317 May cause an allergic skin reaction.	
	H319 Causes serious eye irritation.	
	H332 Harmful if inhaled.	
	H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.	
	H335 May cause respiratory irritation.	
	H351 Suspected of causing cancer.	
	H373 May cause damage to organs through prolonged or repeated exposure, exposure cause the hazard:	
Precautionary statements	Prevention	
	P280 Wear protective gloves/protective clothing/eye protection/face protection.	
	P285 In case of inadequate ventilation wear respiratory protection.	
	Response	
	P302 + P352 IF ON SKIN: Wash with plenty of soap and water.	
	P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.	
	P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.	
	P309 + P311 IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.	
	TEEL-2 (mg/m3)	40
	TEEL-3 (mg/m3)	200

Ecotoxicity

POLYPROPYLENE GLYCOL

CAS Number: 25322-69-4

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 25322-69-4

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1012 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	200
Flash Point (°C)	390

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless, mild sweet odor

Transportation data

Cargo group	30
State	liquid
Temperature (°C)	< 60
Pressure (Pa)	ambient
Family name	olefins

Reactivity data

Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable

Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	1 - Is a floater; and/or is slightly acutely toxic; and/or is mildly irritant to skin and/or eyes

Human toxicity threshold

TEEL-1 (mg/m3)	30
TEEL-2 (mg/m3)	200
TEEL-3 (mg/m3)	500

Ecotoxicity

POTASSIUM ARSENATE

UN Number: 1677

Also known as: ARSENIATE DE POTASSIUM

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1677

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	2800 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	180
Melting Point (°C)	288

Behaviour at sea

Additional data

Colour	white
Odour	odourless
Standard behavior classification	SD

Transportation data

Package group	II
State	solid
Temperature (°C)	ambient
Pressure (Pa)	ambient
IMO class	6.1

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

TLV-TWA	0.07 (As)
TEEL-1 (mg/m3)	0.072
TEEL-2 (mg/m3)	2.5
TEEL-3 (mg/m3)	12

Ecotoxicity

POTASSIUM BROMATE

UN Number: 1484

Also known as: BROMATE DE POTASSIUM

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1484

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	3300 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	167
Boiling Point (°C)	370
Melting Point (°C)	350

Behaviour at sea

Additional data

Colour	white
Odour	odourless

Transportation data

Package group	II
State	solid
Temperature (°C)	ambient
Pressure (Pa)	ambient
IMO class	5.1

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	No
Metal(s) and alloys	Yes

Oxidizing agents	No
Reducing agents	Yes
Combustibles	Yes
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m3)	0.3
TEEL-2 (mg/m3)	60
TEEL-3 (mg/m3)	60

Ecotoxicity

POTASSIUM CHLORIDE

CAS Number: 7447-40-7

Also known as: CHLORURE DE POTASSIUM

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 7447-40-7

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	1980 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	74.55
Boiling Point (°C)	1500
Melting Point (°C)	770
Vapour Pressure (Pa)	2000 (sol. [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Colour white

Transportation data

Transport mode	Bulk (sol.)
Ship type	3 (sol.)
State	solid

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A) 0 - e <1, or > ca.7, or Mol. Wt. > 1000

Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Eye irritation/corrosivity (D2)	0 - Not irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	0 - Is not a floater; and does not pose any known health hazards

Human toxicity threshold

TEEL-2 (mg/m3)	15
TEEL-3 (mg/m3)	15

Ecotoxicity

POTASSIUM CYANIDE

UN Number: 1680

Also known as: CYANURE DE POTASSIUM

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number 1680

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	1500 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	65.12
Boiling Point (°C)	1625
Melting Point (°C)	635

Behaviour at sea

Persistence (days) 1.6

Additional data

Colour	white
Odour	almond odour
Standard behavior classification	SD

Transportation data

State	solid
Temperature (°C)	ambient
IMO class	6.1

Reactivity data

Water	Yes
Acid(s)	Yes
Base(s)	No
Metal(s) and alloys	No

Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

IDHL	20
TLV-TWA	4.5 (CN)
TEEL-3 (mg/m3)	62.6

Ecotoxicity

POTASSIUM HYDROXIDE solution

UN Number: 1813

Also known as: CAUSTIC POTASH

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1813

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	2040 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	56.11
Boiling Point (°C)	1320
Melting Point (°C)	410

Behaviour at sea

Additional data

Colour	colourless, white
Odour	odourless

Transportation data

Transport mode	Bulk, Packaged
Package group	II
State	solid
Temperature (°C)	ambient
Pressure (Pa)	ambient

Reactivity data

Water	No
Acid(s)	No
Base(s)	No
Metal(s) and alloys	Yes

Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

TLV-TWA	0.8
TEEL-1 (mg/m3)	0.3
TEEL-3 (mg/m3)	125

Ecotoxicity

Potassium Hydroxide Solution (50%)

UN Number: 1814 - CAS Number: 1310-58-3

Also known as: Caustic Potash, Potassium Hydrate, Potash, Potassa, Potassium Hydroxide Solution, Potash Lye, Potassium Hydroxide (K(OH)), Potassium Hydroxide Solid, Caustic Potash Solid, Caustic Potash Solution, Potassium Hydrate Solution, Potassium Hydrate Solid, Potassium Hydroxide, Potassium Hydroxide Solution (50%), Hydroxyde De Potassium (Solution)

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1814
CAS number	1310-58-3
Formula	KOH(H ₂ O)

Physical chemical data

Physical State (25°C)	Liquid
Kinematic viscosity (cSt)	5.25 [cSt] at a temperature of 20°C
Solubility (g/L)	10000000 [g/L] at a temperature of 20°C and salinity of 0‰
Boiling Point (°C)	145
Melting Point (°C)	-43

Behaviour at sea

Additional data

MARPOL pollution category

Category	Description
Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.

Transportation data

Reactivity data

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	ED - Evaporator/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



Hazard statements	Physical	
	H290	May be corrosive to metals.
	Health	
	H302	Harmful if swallowed.
	H314	Causes severe skin burns and eye damage.
Precautionary statements	Prevention	
	P260	Do not breathe dust/fume/gas/mist/vapours/spray.
	P280	Wear protective gloves/protective clothing/eye protection/face protection.
	Response	
	P303 + P361 + P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
	P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P310	Immediately call a POISON CENTER or doctor/physician.

Ecotoxicity

POTASSIUM OLEATE

CAS Number: 143-18-0

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 143-18-0

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1000 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	320.57

Behaviour at sea

Additional data

Colour	clear to hazy amber
Odour	soap-like

Transportation data

Cargo group	34
Temperature (°C)	ambient
Family name	esters

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	3 - ≥ 3 and < 4
Bioaccumulation (A1)	3 - Moderate potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible

Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	FD - Floater/Dissolver
Effects on wildlife and bottom habitats (E3)	1 - Is a floater; and/or is slightly acutely toxic; and/or is mildly irritant to skin and/or eyes

Human toxicity threshold

Ecotoxicity

PROPANE

UN Number: 1978 - CAS Number: 74-98-6

Also known as: Dimethylmethane, Propyl Hydride, Propane

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1978
CAS number	74-98-6
Formula	C ₃ H ₈

Physical chemical data

Physical State (20°C)	Gas
Physical State (25°C)	Gas
Density (kg/m ³)	2.012 [Kg/m ³] at a temperature of 20°C 493 [Kg/m ³] at a temperature of 25°C
Molar mass (g/mol)	44.09
Density of gas (kg/m ³)	2.012
Solubility (g/L)	70 [g/L] at a temperature of 20°C and salinity of 0‰
Boiling Point (°C)	-41.9
Melting Point (°C)	-186
Critical temperature (°C)	369.89
Critical pressure (Pa)	4215000
Surface tension (mN/m)	16 [mN/m] at a temperature of -47°C
Interfacial tension (mN/m)	50 [mN/m] at a temperature of -50°C and salinity of 0‰
Vapour Pressure (Pa)	861050 [Pa] at a temperature of 20°C 953260 [Pa] at a temperature of 25°C
Vapour pressure at 70% of critical temperature (Pa)	299030
Ignition Temperature (°C)	470
Flash Point (°C)	-42
Flash Point (Pensky-Martens closed cup) (°C)	-104
Lower explosivity limit (LEL) (volume %)	2.2
Upper explosivity limit (UEL) (volume %)	9.5
Vapor enthalpy (J/Kg)	3353741 [J/Kg] at a temperature of 25°C
Henry's constant (mol/(m ³ ·Pa))	71636.775

Behaviour at sea

Log kow	2.36
Log koc	1.33
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Bioconcentration factor (BCF)	13

Additional data

Colour	colourless
Odour	odourless

MARPOL pollution category	Category	Description
	Other Substances	Substances which have been evaluated and found to fall outside Category X, Y or Z because they are considered to present no harm to marine resources, human health, amenities or other legitimate uses of the sea when discharged into the sea from tank cleaning of deballasting operations. The discharge of bilge or ballast water or other residues or mixtures containing these substances are not subject to any requirements of MARPOL Annex II.

Transportation data

Transport mode	Gas, Packaged
Ship type	2G, 2PG
Cargo group	31
State	liq. compr. gas
Temperature (°C)	ambient
Pressure (Pa)	under pressure
Family name	paraffins
IMO class	2(2.1)

Reactivity data

Water	No
Static electricity	Yes

GESAMP Hazard profile

Interference with coastal amenities (E2)	G - Gas
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Human toxicity threshold



IDHL	20000
Hazard statements	Physical
	H220 Extremely flammable gas.
TLV-TWA	1000
TEEL-1 (mg/m3)	5500 ppm
TEEL-2 (mg/m3)	17000 ppm
TEEL-3 (mg/m3)	33000 ppm

Ecotoxicity

Lowest median lethal concentration (LC50) on crustacean (mg/l)	69.43
Lowest median lethal concentration (LC50) on fishes (mg/l)	49.9

PROPANOL

UN Number: 1274 - CAS Number: 71-23-8

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1274
CAS number	71-23-8

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	803 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	60.1
Density of gas (kg/m ³)	3.48
Boiling Point (°C)	97.4
Melting Point (°C)	-126
Vapour Pressure (Pa)	1933 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	405
Flash Point (°C)	15
Upper explosivity limit (UEL) (volume %)	13.5

Behaviour at sea

Additional data

Colour	colourless
Odour	alcohol odour

Transportation data

Package group	II
Cargo group	20
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	alcohols, glycols
IMO class	3.2/3.3

Reactivity data

Acid(s)	Yes
Base(s)	Yes
Static electricity	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Specific Health Concern (D3)	R - Reprotoxicity
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

IDHL	4000
TLV-TWA	200
TEEL-1 (mg/m3)	250 ppm
TEEL-2 (mg/m3)	250 ppm
TEEL-3 (mg/m3)	800 ppm

Ecotoxicity

PROPIONALDEHYDE

UN Number: 1275

Also known as: ALDEHYDE PROPIONIQUE

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number 1275

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	805 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	58.08
Density of gas (kg/m ³)	2.59
Boiling Point (°C)	48
Melting Point (°C)	-81
Vapour Pressure (Pa)	30000 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	207
Flash Point (°C)	-20
Lower explosivity limit (LEL) (volume %)	2.9
Upper explosivity limit (UEL) (volume %)	17

Behaviour at sea

Additional data

Colour	colourless
Odour	choking, unpleasant odour
Standard behavior classification	DE

Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	19
State	liquid

Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	aldehydes
IMO class	3.1

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	No
Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	DE - Dissolver/Evaporator
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

TEEL-1 (mg/m3)	45 ppm
TEEL-2 (mg/m3)	260 ppm
TEEL-3 (mg/m3)	840 ppm

Ecotoxicity

PROPIONIC ACID solution (with >80% acid)

UN Number: 1848 - CAS Number: 598-78-7

Also known as: ACIDE PROPIONIQUE en solution (avec plus de 80% d'acide), Propanoic Acid, Methylacetic Acid, Ethanecarboxylic Acid, Ethylformic Acid, Carboxyethane, Propionic Acid, Acide Propionique

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1848
CAS number	598-78-7
Formula	C ₃ H ₆ O ₂

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	995 [Kg/m ³] at a temperature of 20°C 988.2 [Kg/m ³] at a temperature of 25°C
Kinematic viscosity (cSt)	1.03 [cSt] at a temperature of 25°C
Molar mass (g/mol)	74.08
Density of gas (kg/m ³)	3.302
Solubility (g/L)	100000 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	141
Melting Point (°C)	-22
Critical molar volume (m ³ /mol)	0.000233
Critical temperature (°C)	598.5
Critical pressure (Pa)	4670000
Surface tension (mN/m)	26.2 [mN/m] at a temperature of 25°C
Vapour Pressure (Pa)	1291 [Pa] at a temperature of 20°C 470 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	485
Flash Point (°C)	50
Flash Point (Pensky-Martens closed cup) (°C)	52
Flash Point (Cleveland open cup) (°C)	57
Lower explosivity limit (LEL) (volume %)	2.9
Upper explosivity limit (UEL) (volume %)	14.8

Vapor enthalpy (J/Kg)	433861 [J/Kg] at a temperature of 25°C
Combustion enthalpy (J/Kg)	20630678
Specific heat capacity (J/(Kg·K))	2063
Henry's constant (mol/(m ³ ·Pa))	0.045

Behaviour at sea

Log K _{ow}	0.3
Log K _{oc}	0.16
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Bioconcentration factor (BCF)	3.2

Additional data

Colour	colourless
Odour	sharp, rancid odour

MARPOL pollution category	Category	Description
	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.

Transportation data

Transport mode	Bulk, Packaged
Package group	III
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	organic acids

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	Yes
Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	3 - Moderately high
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



Hazard statements	Health	
	H314	Causes severe skin burns and eye damage.
Precautionary statements	Prevention	
	P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
	P280	Wear protective gloves/protective clothing/eye protection/face protection.
	Response	
	P303 + P361 + P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
	Storage	
P403 + P235	Store in a well-ventilated place. Keep cool.	
TLV-TWA	10	
TEEL-1 (mg/m3)	10 ppm	
TEEL-2 (mg/m3)	15 ppm	
TEEL-3 (mg/m3)	350 ppm	

Ecotoxicity

Lowest median lethal concentration (LC50) on crustacean (mg/l)	50
Lowest median lethal concentration (LC50) on fishes (mg/l)	51
Highest no observed effect concentration (NOEC) on fishes (mg/l)	188
Assessment factor (AF)	10000 on the short term
Predicted No Effect Concentration (PNEC) (µg/l)	50 [µg/l] on the short term

PROPIONIC ANHYDRIDE

UN Number: 2496 - CAS Number: 123-62-6

Also known as: ANHYDRIDE PROPIONIQUE

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number	2496
CAS number	123-62-6

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1010 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	130.1
Density of gas (kg/m ³)	5.805
Boiling Point (°C)	169
Melting Point (°C)	-45
Vapour Pressure (Pa)	130 [Pa] at a temperature of 20°C
Flash Point (°C)	74
Lower explosivity limit (LEL) (volume %)	1.48
Upper explosivity limit (UEL) (volume %)	11.9

Behaviour at sea

Persistence (days)	0.8
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Additional data

Colour	colourless
Odour	sharp odour
Standard behavior classification	D, FD

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	11

State	liquid
Temperature (°C)	ambient
Pressure (Pa)	under pressure
Family name	organic anhydrides

Reactivity data

Water	Yes
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	Yes
Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	FD - Floater/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TEEL-1 (mg/m3)	30
TEEL-2 (mg/m3)	200
TEEL-3 (mg/m3)	500

Ecotoxicity

PROPIONITRILE

UN Number: 2404

Also known as: CYANOETHANE

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number 2404

Physical chemical data

Physical State (20°C)	Liquid
Molar mass (g/mol)	55.08
Density of gas (kg/m ³)	2.45
Boiling Point (°C)	97.3
Melting Point (°C)	-92.8
Vapour Pressure (Pa)	5200 [Pa] at a temperature of 20°C
Lower explosivity limit (LEL) (volume %)	3.1

Behaviour at sea

Additional data

Colour	colourless
Odour	ethereal

Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	37
State	liquid
Family name	nitriles
IMO class	3.2

Reactivity data

Water	No
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Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	3 - Moderately high
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	3 - Moderately high
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	4 - High
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Specific Health Concern (D3)	R - Reprotoxicity
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TEEL-1 (mg/m3)	6 ppm
TEEL-2 (mg/m3)	7 ppm
TEEL-3 (mg/m3)	37 ppm

Ecotoxicity

PROPYLENE

UN Number: 1077

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1077

Physical chemical data

Physical State (20°C)	Gas
Density (kg/m ³)	1.935 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	42.08
Density of gas (kg/m ³)	1.935
Boiling Point (°C)	-47.5
Melting Point (°C)	-185
Vapour Pressure (Pa)	1053520 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	455
Flash Point (°C)	-48
Upper explosivity limit (UEL) (volume %)	11

Behaviour at sea

Additional data

Colour	colourless
Odour	mild odour

Transportation data

Transport mode	Gas, Packaged
Ship type	2G, 2PG
Cargo group	30
State	liquefied gas
Temperature (°C)	ambient
Pressure (Pa)	under pressure
Family name	olefins
IMO class	2(2.1)

Reactivity data

Acid(s)	Yes
Static electricity	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m3)	1500 ppm
TEEL-2 (mg/m3)	10000 ppm
TEEL-3 (mg/m3)	20000 ppm

Ecotoxicity

PROPYLENE BUTYLENE COPOLYMER

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Liquid
Boiling Point (°C)	very high

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless

Transportation data

Cargo group	30
Family name	olefins

Reactivity data

Water	No
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GESAMP Hazard profile

Human toxicity threshold

Ecotoxicity

PROPYLENE GLYCOL

CAS Number: 57-55-6

Also known as: 1,2-DIHYDROXYPROPANE, 2-Hydroxypropanol, 1,2-Propanediol, Alpha-Propylene Glycol, Monopropylene Glycol, Methylethylene Glycol, Methyl Glycol, Propylene Glycol, Pg 12, Propane-1,2-Diol, Propanediol, Methylethyl Glycol, 1,2-Propylene Glycol, α -Propylene Glycol

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number	57-55-6
Formula	C ₃ H ₈ O ₂

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	1040 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	54.05 [cSt] at a temperature of 20°C 39 [cSt] at a temperature of 25°C
Molar mass (g/mol)	76.09
Density of gas (kg/m ³)	3.39
Solubility (g/L)	1040000 [g/L] at a temperature of 20°C and salinity of 0% 1040000 [g/L] at a temperature of 25°C and salinity of 0%
Boiling Point (°C)	187
Melting Point (°C)	-59
Critical temperature (°C)	676.4
Critical pressure (Pa)	5941000
Surface tension (mN/m)	38 [mN/m] at a temperature of 20°C 36.51 [mN/m] at a temperature of 25°C
Vapour Pressure (Pa)	10.4 [Pa] at a temperature of 20°C 17 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	420
Flash Point (°C)	99
Flash Point (Pensky-Martens closed cup) (°C)	99
Flash Point (Cleveland open cup) (°C)	107.2
Lower explosivity limit (LEL) (volume %)	2.5

Upper explosivity limit (UEL) (volume %)	12.6
Vapor enthalpy (J/Kg)	688000 [J/Kg] at a temperature of 187.6°C 486366 [J/Kg] at a temperature of 25°C
Combust enthalpy (J/Kg)	21700000
Specific heat capacity (J/(Kg·K))	2507.55
Combustion efficiency (%)	99
Mass flow rate of the combustion surface (Kg/(m ² ·s))	0.02
Rad fraction (%)	28
Henry's constant (mol/(m ³ ·Pa))	0.01

Behaviour at sea

Log kow	-0.92
Log koc	0.65
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Biodegradation in marine environment (Half-life) (days)	10
Bioconcentration factor (BCF)	1

Additional data

Colour	colourless
Odour	odourless

MARPOL pollution category	Category	Description
	Z	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment.

Transportation data

Cargo group	20
State	liquid
Temperature (°C)	ambient
Family name	alcohols, glycols

Reactivity data

Water	No
Abilities	Miscible in water..
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	Yes (light metals)
Oxidizing agents	Yes

Organic substance	Yes
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GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	1 - Is a floater; and/or is slightly acutely toxic; and/or is mildly irritant to skin and/or eyes

Human toxicity threshold

TLV-TWA	25
TEEL-1 (mg/m3)	10
TEEL-2 (mg/m3)	10
TEEL-3 (mg/m3)	500

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	19000
Lowest median lethal concentration (LC50) on crustacean (mg/l)	18340
Lowest median lethal concentration (LC50) on fishes (mg/l)	46500
Highest no observed effect concentration (NOEC) on algae (mg/l)	> 5300
Assessment factor (AF)	1000 on the short term 10000 on the long term
Predicted No Effect Concentration (PNEC) (µg/l)	18340 [µg/l] on the short term 1834 [µg/l] on the long term

PROPYLENE GLYCOL METHYL ETHER

UN Number: 3092 - CAS Number: 107-98-2

Also known as: 1,2-Propylene Glycol Monomethyl Ether, 1-Methoxy-2-Propanol, Propylene Glycol Methyl Ether, Ether Methylique De Propylene Glycol

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	3092
CAS number	107-98-2
Formula	C ₄ H ₁₀ O ₂

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	924 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	1.88 [cSt] at a temperature of 20°C 1.86 [cSt] at a temperature of 25°C
Molar mass (g/mol)	90.12
Density of gas (kg/m ³)	3.999
Solubility (g/L)	10000000 [g/L] at a temperature of 20°C and salinity of 0‰
Boiling Point (°C)	121
Melting Point (°C)	-97
Critical temperature (°C)	579.8
Critical pressure (Pa)	4113000
Surface tension (mN/m)	27.27 [mN/m] at a temperature of 20°C
Vapour Pressure (Pa)	1460 [Pa] at a temperature of 20°C 1665 [Pa] at a temperature of 25°C
Flash Point (°C)	38
Flash Point (Pensky-Martens closed cup) (°C)	32
Flash Point (Cleveland open cup) (°C)	36
Combustion enthalpy (J/Kg)	25857120
Specific heat capacity (J/(Kg·K))	2426
Henry's constant (mol/(m ³ ·Pa))	0.09

Behaviour at sea

Log kow	-0.49
Log koc	0
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Bioconcentration factor (BCF)	3.2

Additional data

Colour	colourless				
Odour	mild odour				
MARPOL pollution category	<table><thead><tr><th>Category</th><th>Description</th></tr></thead><tbody><tr><td>Z</td><td>Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment.</td></tr></tbody></table>	Category	Description	Z	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment.
Category	Description				
Z	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment.				

Transportation data

State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient

Reactivity data

Abilities	Miscible in water.
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GESAMP Hazard profile

Interference with coastal amenities (E2)	G - Gas
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Human toxicity threshold



Hazard statements	Physical
	H226 Flammable liquid and vapour.
	Health
	H336 May cause drowsiness or dizziness.

Precautionary statements	Prevention	
	P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
	P233	Keep container tightly closed.
	P240	Ground/bond container and receiving equipment.
	Response	
	P370 + P378	In case of fire: Use ... for extinction.
	Storage	
	P403 + P235	Store in a well-ventilated place. Keep cool.
	Disposal	
	P501	Dispose of contents/container to ...

TLV-TWA	100
TEEL-1 (mg/m3)	150 ppm
TEEL-2 (mg/m3)	300 ppm
TEEL-3 (mg/m3)	750 ppm

Ecotoxicity

Lowest median lethal concentration (LC50) on crustacean (mg/l)	23300
Assessment factor (AF)	100 on the short term
Predicted No Effect Concentration (PNEC) (µg/l)	208000 [µg/l] on the short term

PROPYLENE GLYCOL METHYL ETHER ACETATE

UN Number: 3271 - CAS Number: 108-65-6

Also known as: ACETATE DE L'ETHER METHYLIQUE DU PROPYLENEGLYCOL, 1,2-Propylene Glycol Monomethyl Ether Acetate, 2-Acetoxy-1-Methoxypropane, Propylene Glycol Methyl Ether Acetate, Acetate D'Ether Methylique De Propylene Glycol

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number	3271
CAS number	108-65-6
Formula	C ₆ H ₁₂ O ₃

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	969 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	132.16
Solubility (g/L)	160 [g/L] at a temperature of 20°C and salinity of 0‰
Boiling Point (°C)	150
Melting Point (°C)	-96.7
Critical molar volume (m ³ /mol)	0.000432
Critical temperature (°C)	597.8
Critical pressure (Pa)	3010000
Vapour Pressure (Pa)	496 [Pa] at a temperature of 20°C 517 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	354
Flash Point (°C)	46
Flash Point (Pensky-Martens closed cup) (°C)	42
Lower explosivity limit (LEL) (volume %)	1.3 (78°C)
Upper explosivity limit (UEL) (volume %)	13.1 (140°C)
Henry's constant (mol/(m ³ ·Pa))	40.5

Behaviour at sea

Log kow	0.43
Log koc	1.8

Additional data

Colour	colourless
Odour	sweet, ether-like

MARPOL pollution category	Category	Description
	Z	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment.

Transportation data

Temperature (°C)	ambient
Family name	esters

Reactivity data

Water	No
Oxidizing agents	Yes
Combustibles	No

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - $e < 1$, or $> ca. 7$, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	0 - Not irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	1 - Is a floater; and/or is slightly acutely toxic; and/or is mildly irritant to skin and/or eyes

Human toxicity threshold



Hazard statements	Physical	
	H226	Flammable liquid and vapour.
Precautionary statements	Prevention	
	P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	> 1000
Lowest median lethal concentration (LC50) on crustacean (mg/l)	> 500
Lowest median lethal concentration (LC50) on fishes (mg/l)	100
Highest no observed effect concentration (NOEC) on algae (mg/l)	> 1000
Highest no observed effect concentration (NOEC) on fishes (mg/l)	100
Assessment factor (AF)	100 on the long term
Predicted No Effect Concentration (PNEC) (µg/l)	635 [µg/l] on the long term

PROPYLENE OXIDE

UN Number: 1280 - CAS Number: 75-56-9

Also known as: 1,2-Epoxypropane, 2-Methyloxirane, Propene Oxide, Epoxypropane, Methyloxirane, Propylene Oxide, Oxyde De Propylene

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1280
CAS number	75-56-9
Formula	C ₃ H ₆ O

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	830 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	58.08
Density of gas (kg/m ³)	2.58
Boiling Point (°C)	34.5
Melting Point (°C)	-112
Critical molar volume (m ³ /mol)	0.00019
Vapour Pressure (Pa)	59851 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	430
Flash Point (°C)	-37
Lower explosivity limit (LEL) (volume %)	1.8
Upper explosivity limit (UEL) (volume %)	38.5

Behaviour at sea

Log kow	0.03
Log koc	0.72
Biodegradation in estuary environment (Half-life) (days)	11.6
Bioconcentration factor (BCF)	3

Additional data

Colour	colourless
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Odour	sweet, alcohol odour				
MARPOL pollution category	<table border="1"> <thead> <tr> <th>Category</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Y</td> <td>Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.</td> </tr> </tbody> </table>	Category	Description	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.
Category	Description				
Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.				
Standard behavior classification	DE				

Transportation data

Transport mode	Bulk,Gas,Packaged
Ship type	2G,2PG
Cargo group	16
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	under pressure
Family name	alkylene oxides
IMO class	3.1

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	No
Static electricity	Yes
Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	DE - Dissolver/Evaporator

Human toxicity threshold



IDHL	2000
Hazard statements	<p>Physical</p> <p>H224 Extremely flammable liquid and vapour.</p> <p>Health</p> <p>H312 Harmful in contact with skin.</p> <p>H319 Causes serious eye irritation.</p> <p>H332 Harmful if inhaled.</p> <p>H335 May cause respiratory irritation.</p> <p>H340 May cause genetic defects. Exposure cause the hazard:</p> <p>H350 May cause cancer.</p>
Precautionary statements	<p>Prevention</p> <p>P201 Obtain special instructions before use.</p> <p>P202 Do not handle until all safety precautions have been read and understood.</p> <p>P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.</p> <p>P233 Keep container tightly closed.</p> <p>P240 Ground/bond container and receiving equipment.</p> <p>P241 Use explosion-proof electrical/ventilating/lighting/.../equipment.</p> <p>P242 Use only non-sparking tools.</p> <p>P243 Take precautionary measures against static discharge.</p> <p>P273 Avoid release to the environment.</p> <p>P280 Wear protective gloves/protective clothing/eye protection/face protection.</p> <p>Disposal</p> <p>P501 Dispose of contents/container to ...</p>
TLV-TWA	20
ERPG-1 (ppm)	50
ERPG-2 (ppm)	250
ERPG-3 (ppm)	750

Ecotoxicity

Lowest median lethal concentration (LC50) on fishes (mg/l)	52
Highest no observed effect concentration (NOEC) on fishes (mg/l)	141

Assessment factor (AF)	1000 on the short term
Predicted No Effect Concentration (PNEC) ($\mu\text{g/l}$)	52 [$\mu\text{g/l}$] on the short term

PROPYLENE TETRAMER

UN Number: 2850

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 2850

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	760 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	168.31
Density of gas (kg/m ³)	7.482
Boiling Point (°C)	185
Vapour Pressure (Pa)	400 [Pa] at a temperature of 20°C
Flash Point (°C)	42
Lower explosivity limit (LEL) (volume %)	0.6

Behaviour at sea

Additional data

Colour	colourless
Standard behavior classification	E, FE, F

Transportation data

Package group	III
Cargo group	30
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	olefins
IMO class	3.3

Reactivity data

Acid(s)	Yes
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Oxidizing agents	Yes
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GESAMP Hazard profile

Bioaccumulation in BCF (A1B)	4 - ≥ 500 and < 4000
Bioaccumulation (A1)	4 - High potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	F - Floating substance, not likely to evaporate or to dissolve quickly
Effects on wildlife and bottom habitats (E3)	1 - Is a floater; and/or is slightly acutely toxic; and/or is mildly irritant to skin and/or eyes

Human toxicity threshold

Ecotoxicity

PROPYLENE trimer

UN Number: 2057 - CAS Number: 13987-01-4

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2057
CAS number	13987-01-4

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	738 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	126.24
Density of gas (kg/m ³)	5.61
Boiling Point (°C)	133/142
Flash Point (°C)	24

Behaviour at sea

Additional data

Odour	odourless
Standard behavior classification	F/FE/E

Transportation data

Transport mode	Bulk, Packaged
Package group	II/III
Cargo group	30
Temperature (°C)	ambient
Family name	olefins
IMO class	3.2/3.3

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	5 - ≥ 5 and \leq ca.7
Bioaccumulation in BCF (A1B)	4 - ≥ 500 and < 4000
Bioaccumulation (A1)	4 - High potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	2 - Moderate
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	FE - Floater/Evaporator
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

PYRIDINE

UN Number: 1282 - CAS Number: 110-86-1

Also known as: AZABENZENE, AZINE

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number	1282
CAS number	110-86-1

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	983 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	79.1
Density of gas (kg/m ³)	3.483
Boiling Point (°C)	115.1
Melting Point (°C)	-42
Vapour Pressure (Pa)	1500 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	550
Flash Point (°C)	17
Lower explosivity limit (LEL) (volume %)	1.8
Upper explosivity limit (UEL) (volume %)	12.4

Behaviour at sea

Additional data

Colour	colourless to yellow
Odour	sharp, nauseating odour

Transportation data

Transport mode	Bulk, Packaged
Package group	II
State	liquid
Temperature (°C)	ambient

Pressure (Pa)	under pressure
Family name	aromatic amines
IMO class	3.2

Reactivity data

Acid(s)	Yes
Static electricity	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - $e < 1$, or $> ca. 7$, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

IDHL	3600
TEEL-1 (mg/m3)	15 ppm
TEEL-2 (mg/m3)	200 ppm
TEEL-3 (mg/m3)	1000 ppm

Ecotoxicity

ROSIN

UN Number: 1286 - CAS Number: 8050-09-7

Also known as: CODOIL, COLLOPHANE

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number	1286
CAS number	8050-09-7

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1020 [Kg/m ³] at a temperature of 20°C
Boiling Point (°C)	300/400
Melting Point (°C)	100-150
Vapour Pressure (Pa)	290 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	342
Flash Point (°C)	124/199

Behaviour at sea

Additional data

Colour	light amber to red to black
Odour	pinetree pitch

Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	33
Temperature (°C)	ambient
Family name	miscell. hydroc. mixt
IMO class	3.2

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	3 - ≥ 3 and < 4
Bioaccumulation (A1)	3 - Moderate potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Specific Health Concern (D3)	Ss - Skin Sensitization
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

Sec-BUTYL ACETATE

UN Number: 1123 - CAS Number: 123-86-4

Also known as: ACETATES DE BUTYLE, Sec-BUTYL ACETATE

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number	1123
CAS number	123-86-4

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	872 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	116.16
Density of gas (kg/m ³)	5.173
Boiling Point (°C)	112
Melting Point (°C)	-73
Vapour Pressure (Pa)	1500 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	480
Flash Point (°C)	19
Lower explosivity limit (LEL) (volume %)	1.7
Upper explosivity limit (UEL) (volume %)	9.8

Behaviour at sea

Persistence (days)	0.8
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Additional data

Colour	colourless
Odour	pleasant, fruit odour
Standard behavior classification	FED

Transportation data

Package group	II/III
Cargo group	34

State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	esters
IMO class	3.2/3.3

Reactivity data

Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	FED - Floater/Evaporator/Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

IDHL	10000
TLV-TWA	200
TEEL-1 (mg/m3)	200 ppm
TEEL-2 (mg/m3)	350ppm
TEEL-3 (mg/m3)	1700 ppm

Ecotoxicity

SEC-BUTYL ALCOHOL

UN Number: 1120

Also known as: ALCOOL BUTYLIQUE SECONDAIRE, Sec-BUTANOL, 2-BUTANOL, BUTYLENE HYDRATE

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number 1120

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	810 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	74.12
Density of gas (kg/m ³)	3.3
Boiling Point (°C)	99.5
Melting Point (°C)	-115
Vapour Pressure (Pa)	1300 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	406
Flash Point (°C)	24
Lower explosivity limit (LEL) (volume %)	1.7

Behaviour at sea

Additional data

Colour	colourless
Odour	strong pleasant alcohol odour

Transportation data

Package group	II
Cargo group	20
State	liquid
Temperature (°C)	ambient
Family name	alcohols, glycols
IMO class	3.2

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	Yes
Oxidizing agents	Yes
Combustibles	Yes
Organic substance	Yes

GESAMP Hazard profile

Human toxicity threshold

IDHL	2000
TLV-TWA	100
TEEL-1 (mg/m3)	50 ppm
TEEL-2 (mg/m3)	50 ppm
TEEL-3 (mg/m3)	1400 ppm

Ecotoxicity

SILICON TETRACHLORIDE

UN Number: 1818

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1818

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1480 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	169.9
Density of gas (kg/m ³)	7.611
Boiling Point (°C)	57.8
Melting Point (°C)	-68
Vapour Pressure (Pa)	25900 [Pa] at a temperature of 20°C

Behaviour at sea

Persistence (days) 1.6

Additional data

Colour	colourless to light yellow
Odour	choking odour
Standard behavior classification	DE, SD

Transportation data

Package group	II
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	under pressure

Reactivity data

Water	Yes
Acid(s)	No
Base(s)	No

Metal(s) and alloys	Yes
Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

IDHL	15
TLV-TWA	0.03
ERPG-1 (ppm)	0.75
ERPG-3 (ppm)	37

Ecotoxicity

SODIUM ALUMINATE solutions

UN Number: 1819 - CAS Number: 11138-49-1

Also known as: ALUMINATE DE SODIUM en solution

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1819
CAS number	11138-49-1

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1550 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	81.97
Boiling Point (°C)	115
Melting Point (°C)	1650

Behaviour at sea

Additional data

Colour	colourless to amber
Odour	odourless

Transportation data

Transport mode	Bulk, Packaged
Package group	II/III
State	liquid
Temperature (°C)	ambient
Family name	caustics

Reactivity data

Water	No
Acid(s)	Yes
Metal(s) and alloys	Yes (Al, Cu, Sn, Zn)

Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TEEL-1 (mg/m3)	8.75
TEEL-2 (mg/m3)	8.75
TEEL-3 (mg/m3)	8.75

Ecotoxicity

SODIUM ARSENATE

UN Number: 1685

Also known as: ARSENIATE DE SODIUM

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number 1685

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	1900 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	312
Boiling Point (°C)	180
Melting Point (°C)	130

Behaviour at sea

Additional data

Colour	white
Odour	odourless

Transportation data

Package group	II
State	solid
Temperature (°C)	ambient
Pressure (Pa)	ambient
IMO class	6.1

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

TLV-TWA	0.16 (As)
TEEL-1 (mg/m3)	7.5
TEEL-2 (mg/m3)	13.5
TEEL-3 (mg/m3)	13.5

Ecotoxicity

SODIUM ARSENITE

UN Number: 1686

Also known as: ARSENIOS ACID MONOSODIUM SALT, ARSENITE DE SODIUM, ATLAS A (T), CHEM PELS (T)

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1686

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m³)	1870 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	129.9
Melting Point (°C)	615

Behaviour at sea

Additional data

Colour	white to grey
Odour	odourless
Standard behavior classification	D, SD, S

Transportation data

State	solid
Temperature (°C)	ambient
Pressure (Pa)	under pressure
IMO class	6.1

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

TLV-TWA	0.16 (As)
TEEL-1 (mg/m3)	0.075
TEEL-2 (mg/m3)	0.6
TEEL-3 (mg/m3)	8.67

Ecotoxicity

SODIUM BENZOATE

CAS Number: 532-32-1

Also known as: BENZOATE DE SODIUM

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

CAS number 532-32-1

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	1440 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	144.11
Melting Point (°C)	300
Ignition Temperature (°C)	>500
Flash Point (°C)	>100

Behaviour at sea

Additional data

Colour white

Transportation data

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable

Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	0 - Not irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	1 - Is a floater; and/or is slightly acutely toxic; and/or is mildly irritant to skin and/or eyes

Human toxicity threshold

Ecotoxicity

SODIUM CACODYLATE

UN Number: 1688

Also known as: CACODYLATE DE SODIUM

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number 1688

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	1100 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	160

Behaviour at sea

Additional data

Colour	colourless to light yellow
Odour	odourless
Standard behavior classification	SD

Transportation data

Package group	II
State	solid, solut.
Temperature (°C)	ambient
Pressure (Pa)	ambient
IMO class	6.1

Reactivity data

Water	No
Acid(s)	No
Base(s)	No
Metal(s) and alloys	Yes
Oxidizing agents	No

Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m3)	3.2
TEEL-2 (mg/m3)	40
TEEL-3 (mg/m3)	500

Ecotoxicity

SODIUM CHLORATE

UN Number: 1495 - CAS Number: 7775-09-9

Also known as: CHLORATE DE SODIUM, CHLORATE OF SODA

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number	1495
CAS number	7775-09-9

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	2200 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	106.45
Boiling Point (°C)	1413
Melting Point (°C)	255

Behaviour at sea

Additional data

Colour	colourless to pale yellow
Odour	odourless
Standard behavior classification	SD

Transportation data

Package group	II
State	solid
Temperature (°C)	ambient
Pressure (Pa)	ambient
IMO class	5.1

Reactivity data

Water	No
Acid(s)	No

Base(s)	No
Metal(s) and alloys	Yes
Oxidizing agents	No
Reducing agents	Yes
Combustibles	No
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

TEEL-1 (mg/m3)	0.4
TEEL-3 (mg/m3)	75

Ecotoxicity

SODIUM CHLORATE solutions (50% or less)

UN Number: 2428 - CAS Number: 7775-09-9

Also known as: CHLORATE OF SODA, CHLORATE DE SODIUM en solution (< 50%)

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2428
CAS number	7775-09-9

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	2500 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	106.4
Boiling Point (°C)	decomp
Melting Point (°C)	248

Behaviour at sea

Additional data

Colour	colourless to pale yellow
Odour	odourless
Standard behavior classification	D/DE

Transportation data

Transport mode	Bulk, Packaged
Package group	II/III
State	liquid
Temperature (°C)	ambient
IMO class	5.1

Reactivity data

Water	No
Acid(s)	Yes

Base(s)	Yes
Metal(s) and alloys	Yes
Oxidizing agents	Yes
Reducing agents	Yes
Combustibles	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

TEEL-1 (mg/m3)	0.4
TEEL-3 (mg/m3)	75

Ecotoxicity

SODIUM CYANIDE solid

UN Number: 1689

Also known as: CYANIDE OF SODIUM, CYANURE DE SODIUM solide

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1689

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	1600 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	49.01
Boiling Point (°C)	1496
Melting Point (°C)	563

Behaviour at sea

Additional data

Colour	white
Odour	odourless

Transportation data

State	solid
Temperature (°C)	ambient
Pressure (Pa)	ambient
IMO class	6.1

Reactivity data

Water	Yes
Acid(s)	No
Base(s)	No
Metal(s) and alloys	No
Oxidizing agents	No

Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

IDHL	45
TLV-TWA	4.5 (CN)
TEEL-3 (mg/m3)	47.1

Ecotoxicity

SODIUM DICHROMATE

CAS Number: 10588-01-9

Also known as: BICHROMATE OF SODA, DICHROMATE DE SODIUM

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 10588-01-9

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	2350 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	262.01
Boiling Point (°C)	decomp.
Melting Point (°C)	357

Behaviour at sea

Additional data

Colour	red to orange
Odour	almond odour
Standard behavior classification	SD

Transportation data

State	solid
Temperature (°C)	ambient
Pressure (Pa)	ambient

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	No
Oxidizing agents	Yes

Reducing agents	No
Combustibles	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	1 - Low
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	4 - High
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

IDHL	115
TLV-TWA	0.02 (Cr)
TEEL-1 (mg/m3)	20
TEEL-2 (mg/m3)	37.8
TEEL-3 (mg/m3)	37.8

Ecotoxicity

SODIUM HYDROGEN SULPHITE solutions (45% or less)

UN Number: 2693 - CAS Number: 7631-90-5

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2693
CAS number	7631-90-5

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1360 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	104.06
Density of gas (kg/m ³)	2.84
Boiling Point (°C)	> 100
Melting Point (°C)	< 0

Behaviour at sea

Additional data

Colour	pale yellow
Odour	pungent, sulphur dioxide-like
Standard behavior classification	D/DE

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	43
State	liquid
Temperature (°C)	ambient
Family name	miscell. water solut.

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Eye irritation/corrosivity (D2)	0 - Not irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	0 - Is not a floater; and does not pose any known health hazards

Human toxicity threshold

TLV-TWA 1.08

Ecotoxicity

SODIUM HYDROSULPHIDE (<25% water of crystallization)

UN Number: 2318

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 2318

Physical chemical data


Physical State (20°C)	Liquid
Density (kg/m ³)	1300 [Kg/m ³] at a temperature of 20°C
Boiling Point (°C)	64
Vapour Pressure (Pa)	2261 [Pa] at a temperature of 20°C
Lower explosivity limit (LEL) (volume %)	4.3
Upper explosivity limit (UEL) (volume %)	45.5

Behaviour at sea

Additional data

Colour	light yellow to red
Odour	odourless

Transportation data

Transport mode	Bulk, Packaged
Package group	II
State	liquid
Temperature (°C)	> 17 
Pressure (Pa)	under pressure
Family name	caustics
IMO class	4.2

Reactivity data

Water	No
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Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	Yes
Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	Yes

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m3)	0.15
TEEL-2 (mg/m3)	1.25

Ecotoxicity

SODIUM HYDROSULPHIDE solutions (45% or less)

UN Number: 2949 - CAS Number: 16721-80-5

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2949
CAS number	16721-80-5

Physical chemical data


Physical State (20°C)	Liquid
Density (kg/m ³)	< 1300 [Kg/m ³] at a temperature of 20°C
Boiling Point (°C)	100
Melting Point (°C)	17

Behaviour at sea

Additional data

Colour	light yellow to red
Odour	rotten egg

Transportation data

Transport mode	Bulk, Packaged
Package group	II
State	liquid
Temperature (°C)	> 17  C
Family name	caustics

Reactivity data

Water	No
Acid(s)	Yes
Metal(s) and alloys	Yes
Oxidizing agents	Yes

Combustibles	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

SODIUM HYDROXIDE solid

UN Number: 1823 - CAS Number: 1310-73-2

Also known as: CAUSTIC SODA, Lye, Soda Lye, Sodium Hydrate, White Caustic, Sodium Hydroxide Solution, Caustic Soda Solution, Sodium Hydroxide (Na(OH)), Sodium Hydrate Solution, Sodium Hydroxide Solid, Caustic Soda Solid, Sodium Hydrate Solid, Sodium Hydroxide, Sodium Hydroxide Solution (40%), Solution D'Hydroxyde De Sodium (40%)

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1823
CAS number	1310-73-2
Formula	NaOH

Physical chemical data

Physical State (20°C)	Solid
Physical State (25°C)	Liquid
Density (kg/m ³)	2100 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	25.35 [cSt] at a temperature of 20°C
Molar mass (g/mol)	40
Solubility (g/L)	10000000 [g/L] at a temperature of 20°C and salinity of 0‰
Boiling Point (°C)	1390
Melting Point (°C)	318

Behaviour at sea

Additional data

Colour	white
Odour	rotten egg odour

MARPOL pollution category	Category	Description
	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.

Transportation data

Package group	II
State	solid
Temperature (°C)	ambient
Pressure (Pa)	ambient

Reactivity data

Water	No
Abilities	Solution.
Acid(s)	No
Base(s)	No
Metal(s) and alloys	Yes
Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No
Notable risks	Reacts with many compounds.

GESAMP Hazard profile

Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver

Effects on wildlife and bottom habitats (E3)

3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



IDHL	150
Hazard statements	Physical
	H290 May be corrosive to metals.
	Health
	H314 Causes severe skin burns and eye damage.
	H315 Causes skin irritation.
	H319 Causes serious eye irritation.
Precautionary statements	Prevention
	P260 Do not breathe dust/fume/gas/mist/vapours/spray.
	P280 Wear protective gloves/protective clothing/eye protection/face protection.
	Response
	P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
	P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P310 Immediately call a POISON CENTER or doctor/physician.
TLV-TWA	1.2
ERPG-1 (ppm)	0.5 mg
ERPG-2 (ppm)	5 mg
ERPG-3 (ppm)	50 mg

Ecotoxicity

SODIUM HYDROXIDE solutions (33%)

UN Number: 1824 - CAS Number: 1310-73-2

Also known as: CAUSTIC SODA

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1824
CAS number	1310-73-2

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1480 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	40
Density of gas (kg/m ³)	1.78
Boiling Point (°C)	140
Vapour Pressure (Pa)	900 [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless

Transportation data

Transport mode	Bulk, Packaged
Package group	II/III
State	liquid
Family name	caustics

Reactivity data

Water	Yes
Acid(s)	Yes
Base(s)	No

Metal(s) and alloys	Yes
Oxidizing agents	Yes
Combustibles	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

IDHL	250
ERPG-1 (ppm)	0.5
ERPG-3 (ppm)	50

Ecotoxicity

SODIUM HYPOCHLORITE solution (>5% avail. chlorine)

UN Number: 1791 - CAS Number: 7681-52-9

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1791
CAS number	7681-52-9

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1060 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	74.4
Melting Point (°C)	27

Behaviour at sea

Additional data

Colour	green to yellow
Odour	odourless

Transportation data

Package group	II
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	under pressure

Reactivity data

GESAMP Hazard profile

Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic

Chronic aquatic toxicity (B2) (NOEC (mg/l))	1 - Low
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TEEL-2 (mg/m3)	50
TEEL-3 (mg/m3)	500

Ecotoxicity

SODIUM metal

UN Number: 1428

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1428

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	971 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	22.49
Boiling Point (°C)	883
Melting Point (°C)	97.8
Ignition Temperature (°C)	121

Behaviour at sea

Additional data

Colour	silver to greyish-white
Odour	weak odour
Standard behavior classification	D, FD

Transportation data

State	liquid, solid
Temperature (°C)	110 - 121, ambient
Pressure (Pa)	under pressure
IMO class	4.3

Reactivity data

Water	Yes
Acid(s)	No
Base(s)	No
Metal(s) and alloys	No
Oxidizing agents	No

Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m3)	0.5
TEEL-3 (mg/m3)	50

Ecotoxicity

SODIUM NITRITE

UN Number: 1500 - CAS Number: 7632-00-0

Also known as: ANTI-RUST

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number	1500
CAS number	7632-00-0

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	2200 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	69
Boiling Point (°C)	320
Melting Point (°C)	271

Behaviour at sea

Additional data

Colour	white
Odour	bleaching liquid odour
Standard behavior classification	SD

Transportation data

Package group	II
State	solid
Temperature (°C)	ambient
Pressure (Pa)	ambient
IMO class	5.1

Reactivity data

GESAMP Hazard profile

Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	0 - Not irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	SD - Sinker/Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

TEEL-1 (mg/m3)	0.15
TEEL-3 (mg/m3)	60

Ecotoxicity

SODIUM PENTACHLOROPHENATE

UN Number: 2567

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 2567

Physical chemical data

Physical State (20°C)	Solid
Molar mass (g/mol)	288.35
Boiling Point (°C)	decomp.

Behaviour at sea

Additional data

Colour	buff coloured
Odour	phenolic
Marine pollutant	P
Standard behavior classification	SD/D

Transportation data

Package group	II
State	solid
Temperature (°C)	ambient
IMO class	6.1

Reactivity data

Water	No
Oxidizing agents	Yes

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m3)	3.5
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TEEL-2 (mg/m3)	24
TEEL-3 (mg/m3)	75

Ecotoxicity

SODIUM PEROXIDE

UN Number: 1504

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1504

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	2800 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	78
Boiling Point (°C)	657
Melting Point (°C)	460

Behaviour at sea

Additional data

Colour pale yellow

Transportation data

State	solid
Temperature (°C)	ambient
IMO class	5.1

Reactivity data

Water	Yes
Metal(s) and alloys	Yes (light metals)
Reducing agents	Yes
Combustibles	Yes

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m³) 10

TEEL-2 (mg/m3)	10
TEEL-3 (mg/m3)	10

Ecotoxicity

SODIUM PETROLEUM SULPHONATE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1050 [Kg/m ³] at a temperature of 20°C
Melting Point (°C)	-5
Vapour Pressure (Pa)	< 100 [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Transportation data

Reactivity data

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

SODIUM SILICATE

CAS Number: 1344-09-8

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 1344-09-8

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	1700 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	122.1
Melting Point (°C)	1088

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless
Standard behavior classification	SD

Transportation data

State	visc. liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient

Reactivity data

Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight

Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TEEL-1 (mg/m3)	25
TEEL-2 (mg/m3)	150
TEEL-3 (mg/m3)	500

Ecotoxicity

SODIUM SULPHATE solutions

CAS Number: 7757-82-6

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 7757-82-6

Physical chemical data

Physical State (20°C) Liquid

Vapour Pressure (Pa) 2000 [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Transportation data

Cargo group 43

State liquid

Reactivity data

Acid(s) Yes

Oxidizing agents Yes

Organic substance Yes

GESAMP Hazard profile

Bioaccumulation in BCF (A1B) 0 - No measurable BCF

Bioaccumulation (A1) 0 - No potential to bioaccumulate

Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l)) 0 - Non-toxic

Chronic aquatic toxicity (B2) (NOEC (mg/l)) 0 - Negligible

Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg)) 0 - Negligible

Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg)) 0 - Negligible

Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l)) 1 - Slight

Eye irritation/corrosivity (D2) 1 - Mildly irritating

Interference with coastal amenities (E2) SD - Sinker/Dissolver

Human toxicity threshold

Ecotoxicity

SODIUM SULPHIDE (<30% water of cristallization)

UN Number: 1385 - CAS Number: 1313-82-2

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1385
CAS number	1313-82-2

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	2470 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	78.4

Behaviour at sea

Additional data

Colour	yellow to red
Odour	odourless

Transportation data

Package group	II
State	solid
Temperature (°C)	ambient
Pressure (Pa)	ambient
IMO class	4.2

Reactivity data

GESAMP Hazard profile

Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic

Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TEEL-1 (mg/m3)	2.5
TEEL-2 (mg/m3)	15
TEEL-3 (mg/m3)	75

Ecotoxicity

SODIUM SULPHITE

CAS Number: 7757-83-7

Also known as: DISODIUM SULPHITE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 7757-83-7

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	2600 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	126.04
Melting Point (°C)	>500

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless
Standard behavior classification	SD

Transportation data

State	solid
Temperature (°C)	ambient
Pressure (Pa)	ambient

Reactivity data

GESAMP Hazard profile

Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic

Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	1 - Is a floater; and/or is slightly acutely toxic; and/or is mildly irritant to skin and/or eyes

Human toxicity threshold

TEEL-1 (mg/m3)	30
TEEL-2 (mg/m3)	50
TEEL-3 (mg/m3)	100

Ecotoxicity

SODIUM THIOCYANATE solutions (56% or less)

CAS Number: 540-72-7

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 540-72-7

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	> 1000 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	81.08
Melting Point (°C)	< 0
Vapour Pressure (Pa)	2000 [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Colour	clear to pale yellow
Odour	odourless

Transportation data

State	liquid
Temperature (°C)	ambient

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate

Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Eye irritation/corrosivity (D2)	0 - Not irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	1 - Is a floater; and/or is slightly acutely toxic; and/or is mildly irritant to skin and/or eyes

Human toxicity threshold

TEEL-1 (mg/m3)	0.75
TEEL-3 (mg/m3)	100

Ecotoxicity

SORBITOL solution

CAS Number: 50-70-4

Also known as: CHOLAXINE, DI AKARMON

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 50-70-4

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	1490 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	182.17
Density of gas (kg/m ³)	4.128
Melting Point (°C)	100
Flash Point (°C)	918

Behaviour at sea

Additional data

Colour	colourless
Odour	rotten egg odour
Standard behavior classification	D, SD, S

Transportation data

Cargo group	20
State	liquid
Temperature (°C)	elevated
Pressure (Pa)	ambient
Family name	alcohols, glycols

Reactivity data

Acid(s)	Yes
Base(s)	Yes

Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Eye irritation/corrosivity (D2)	0 - Not irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	0 - Is not a floater; and does not pose any known health hazards

Human toxicity threshold

TEEL-1 (mg/m3)	125
TEEL-2 (mg/m3)	500
TEEL-3 (mg/m3)	500

Ecotoxicity

STYRENE MONOMER inhibited

UN Number: 2055 - CAS Number: 100-42-5

Also known as: CINNAMENE, CINNAMENOL, DIAREX HF 77, Ethenylbenzene, Phenylethene, Phenethylene, Phenylethylene, Styrene Monomer, Styrol, Styrolene, Vinylbenzene, Vinylbenzol, Vinyl Benzene, Styrene

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2055
CAS number	100-42-5
Formula	C ₈ H ₈

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	906 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	0.83 [cSt] at a temperature of 20°C 0.75 [cSt] at a temperature of 25°C
Molar mass (g/mol)	104.15
Density of gas (kg/m ³)	4.631
Solubility (g/L)	300 [g/L] at a temperature of 20°C and salinity of 0‰ 310 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	145.4
Melting Point (°C)	-31
Surface tension (mN/m)	32.14 [mN/m] at a temperature of 20°C
Interfacial tension (mN/m)	35.48 [mN/m] at a temperature of 20°C and salinity of 0‰
Vapour Pressure (Pa)	600 [Pa] at a temperature of 20°C 810 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	490
Flash Point (°C)	32
Flash Point (Pensky-Martens closed cup) (°C)	31
Flash Point (Cleveland open cup) (°C)	34.4
Lower explosivity limit (LEL) (volume %)	1.1
Upper explosivity limit (UEL) (volume %)	6.1
Vapor enthalpy (J/Kg)	371579 [J/Kg] at a temperature of 145.2°C

Combustion enthalpy (J/Kg)	40500000
Specific heat capacity (J/(Kg·K))	1747.5
Combustion efficiency (%)	70
Mass flow rate of the combustion surface (Kg/(m ² ·s))	0.07
Rad fraction (%)	60
Henry's constant (mol/(m ³ ·Pa))	278

Behaviour at sea

Log kow	3.02
Log koc	2.96
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Biodegradation in marine environment (Half-life) (days)	50
Bioconcentration factor (BCF)	74

Additional data

Colour	colourless to light yellow	
Odour	odourless	
MARPOL pollution category	Category	Description
	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.
Standard behavior classification	FE	

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	30
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	olefins
IMO class	3.3

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	No

Metal(s) and alloys	No
Static electricity	Yes
Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	Yes
Notable risks	Polymerization.

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	3 - ≥ 3 and < 4
Bioaccumulation in BCF (A1B)	2 - ≥ 10 and < 100
Bioaccumulation (A1)	3 - Moderate potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/LC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	FE - Floater/Evaporator
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



IDHL	5000	
Hazard statements	Health	
	H317	May cause an allergic skin reaction.
	Environmental	
	H400	Very toxic to aquatic life.
	H410	Very toxic to aquatic life with long lasting effects.

Precautionary statements	Prevention	
	P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
	P272	Contaminated work clothing should not be allowed out of the workplace.
	P273	Avoid release to the environment.
	P280	Wear protective gloves/protective clothing/eye protection/face protection.
	Response	
	P321	Specific treatment (see ... on this label).
	P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
	P363	Wash contaminated clothing before reuse.
	P391	Collect spillage.
	Disposal	
	P501	Dispose of contents/container to ...

TLV-TWA	50
ERPG-1 (ppm)	50
ERPG-2 (ppm)	250
ERPG-3 (ppm)	1000

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	4.9
Lowest median lethal concentration (LC50) on crustacean (mg/l)	4.7
Lowest median lethal concentration (LC50) on fishes (mg/l)	4.02
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	1.01
Assessment factor (AF)	100 on the short term 1000 on the long term
Predicted No Effect Concentration (PNEC) (µg/l)	40.2 [µg/l] on the short term 4.02 [µg/l] on the long term

SULPHOHYDROCARBON LONG CHAIN (18+) ALKYLAMINE mixture

Also known as: ALKYLAMINES A LONGUES CHAINES SULFOHYDROCARBONEES mélanges (C18+)

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1000/1100 [Kg/m ³] at a temperature of 20°C
Boiling Point (°C)	> 100
Melting Point (°C)	< 0
Vapour Pressure (Pa)	< 1300 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	260/370
Flash Point (°C)	80

Behaviour at sea

Additional data

Colour	yellow-brown
Odour	lub oil

Transportation data

Cargo group	33
State	liquid
Family name	miscell. hydroc. mixt

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Human toxicity threshold

Ecotoxicity

SULPHOLANE

CAS Number: 126-33-0

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 126-33-0

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	> 1260 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	120.17
Boiling Point (°C)	285
Melting Point (°C)	26
Vapour Pressure (Pa)	10 [Pa] at a temperature of 20°C
Flash Point (°C)	166

Behaviour at sea

Additional data

Colour	colourless
Odour	weak oily

Transportation data

Cargo group	39
Temperature (°C)	ambient
Family name	sulpholane

Reactivity data

Water	No
Acid(s)	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	1 - ≥1 and <10

Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	SD - Sinker/Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

SULPHUR DIOXIDE liquefied

UN Number: 1079

Also known as: DIOXYDE DE SOUFRE liquefié

Information on chemical

External resources

[CAMEO Chemical Database](#)
[WISER Substance List](#)

Description

UN number 1079

Physical chemical data

Physical State (20°C)	Gas
Density (kg/m ³)	2.967 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	64.06
Density of gas (kg/m ³)	2.967
Boiling Point (°C)	-10
Melting Point (°C)	-75
Vapour Pressure (Pa)	324160 [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Colour	colourless
Odour	weak rotten egg odour
Standard behavior classification	GD, G

Transportation data

Transport mode	Gas, Packaged
Ship type	1G
State	liquefied gas
Temperature (°C)	< 54
Pressure (Pa)	under pressure
IMO class	2(2.3)

Reactivity data

Water	Yes
Acid(s)	No
Base(s)	No
Metal(s) and alloys	No
Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

IDHL	100
ERPG-1 (ppm)	0.3
ERPG-3 (ppm)	15

Ecotoxicity

SULPHUR HEXAFLUORIDE

UN Number: 1080

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1080

Physical chemical data

Physical State (20°C)	Gas
Density (kg/m ³)	6.579 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	146.1
Density of gas (kg/m ³)	6.579
Boiling Point (°C)	-64
Melting Point (°C)	-51
Vapour Pressure (Pa)	2100000 [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Odour sharp, irritating odour

Transportation data

State	liq.compr.gas
IMO class	2(2.2)

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

TLV-TWA	1000
TEEL-1 (mg/m ³)	3000 ppm
TEEL-2 (mg/m ³)	5000 ppm
TEEL-3 (mg/m ³)	5000 ppm

Ecotoxicity

SULPHUR molten

UN Number: 2448 - CAS Number: 7704-34-9

Also known as: Sulphur (Commercially Formed, Solid), Souffre (Solide), Sulphur (Molten), Souffre (Fondu)

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2448
CAS number	7704-34-9
Formula	S

Physical chemical data

Physical State (20°C)	Solid
Physical State (25°C)	Liquid
Density (kg/m ³)	1800 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	256.51
Density of gas (kg/m ³)	11.48
Solubility (g/L)	0 [g/L] at a temperature of 20°C and salinity of 0‰ 0 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	444.8
Melting Point (°C)	113
Vapour Pressure (Pa)	10 [Pa] at a temperature of 20°C 5e-07 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	260
Flash Point (°C)	168
Lower explosivity limit (LEL) (volume %)	0.3
Upper explosivity limit (UEL) (volume %)	12.1

Behaviour at sea

Additional data

Colour	yellow,orange,brown,grey
Odour	sweet, pleasant odour

MARPOL pollution category	Category	Description
	Z	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment.

Transportation data

Transport mode	Bulk, Packaged
Package group	III
State	liquid
Temperature (°C)	132
Pressure (Pa)	under pressure
IMO class	4.1

Reactivity data

GESAMP Hazard profile

Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly
Effects on wildlife and bottom habitats (E3)	1 - Is a floater; and/or is slightly acutely toxic; and/or is mildly irritant to skin and/or eyes

Human toxicity threshold



Hazard statements	Health
	H315 Causes skin irritation.
TEEL-1 (mg/m3)	0.4
TEEL-2 (mg/m3)	2.5
TEEL-3 (mg/m3)	12.5

Ecotoxicity

SULPHURIC ACID (fuming)

UN Number: 1831 - CAS Number: 7664-93-9

Also known as: ACIDE SULFURIQUE (fumant)

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1831
CAS number	7664-93-9

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1920 [Kg/m ³] at a temperature of 20°C
Density of gas (kg/m ³)	3.483
Boiling Point (°C)	139
Vapour Pressure (Pa)	900 [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Colour	colourless to cloudy
Odour	odourless

Transportation data

Transport mode	Bulk, Packaged
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient

Reactivity data

Water	Yes
Acid(s)	No
Base(s)	No
Metal(s) and alloys	Yes

Oxidizing agents	No
Reducing agents	No
Combustibles	Yes
Organic substance	No

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	3 - Moderately high
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	3 - Moderately high
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	4 - High
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

ERPG-1 (ppm)	2 mg
ERPG-2 (ppm)	10 mg
ERPG-3 (ppm)	30 mg

Ecotoxicity

SULPHURIC ACID (spent)

UN Number: 1832 - CAS Number: 7664-93-9

Also known as: ACIDE SULPHURIQUE (résiduaire)

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1832
CAS number	7664-93-9

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1390 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	98.1
Density of gas (kg/m ³)	4.386
Boiling Point (°C)	100
Melting Point (°C)	-32
Vapour Pressure (Pa)	10100 [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Colour	colourless to dark brown
Standard behavior classification	DE, D

Transportation data

Transport mode	Bulk, Packaged
Package group	II
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	sulfuric acid

Reactivity data

Water	Yes
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	Yes
Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	3 - Moderately high
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	3 - Moderately high
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	4 - High
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

IDHL	20
TLV-TWA	0.25
ERPG-1 (ppm)	2 mg
ERPG-2 (ppm)	10 mg
ERPG-3 (ppm)	30 mg

Ecotoxicity

SULPHURIC ACID (with more than 51% acid)

UN Number: 1830 - CAS Number: 7664-93-9

Also known as: ACIDE SULFURIQUE (avec plus de 51% d'acide), Battery Acid, Dihydrogen Sulfate++, Electrolyte Acid, Hydrogen Sulfate, Matting Acid, Oil Of Vitriol, Spirit Of Sulfur, Sulphuric Acid, Dipping Acid, Sulfuric Acid, Acide Sulfurique

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1830
CAS number	7664-93-9
Formula	H ₂ SO ₄

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	1840 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	21 [cSt] at a temperature of 25°C
Molar mass (g/mol)	98.08
Density of gas (kg/m ³)	4.386
Solubility (g/L)	1840000 [g/L] at a temperature of 20°C and salinity of 0% 1840000 [g/L] at a temperature of 25°C and salinity of 0%
Boiling Point (°C)	340
Melting Point (°C)	-35
Surface tension (mN/m)	5.51 [mN/m] at a temperature of 20°C
Vapour Pressure (Pa)	10100 [Pa] at a temperature of 20°C
Specific heat capacity (J/(Kg·K))	1416
Henry's constant (mol/(m ³ ·Pa))	20.1

Behaviour at sea

Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	1
Biodegradation in marine environment (Half-life) (days)	Not biodegradable
Bioconcentration factor (BCF)	0

Additional data

Colour	colourless to dark brown				
Odour	odourless. When hot, choking				
MARPOL pollution category	<table><thead><tr><th>Category</th><th>Description</th></tr></thead><tbody><tr><td>Y</td><td>Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.</td></tr></tbody></table>	Category	Description	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.
Category	Description				
Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.				
Standard behavior classification	DE, D				

Transportation data

Transport mode	Bulk, Packaged
Package group	II
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	sulfuric acid

Reactivity data

Water	Yes
Abilities	Miscible in water.
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	Yes
Oxidizing agents	Yes
Reducing agents	No
Combustibles	Yes
Organic substance	Yes
Notable risks	Reacts with water. Reacts to heat Oxidizer Reacts with other compounds.

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - $e < 1$, or $> ca. 7$, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	3 - Moderately high
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	3 - Moderately high
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	4 - High
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury

Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



IDHL	12.5
Hazard statements	<p>Health</p> <p>H314 Causes severe skin burns and eye damage.</p>
Precautionary statements	<p>Prevention</p> <p>P280 Wear protective gloves/protective clothing/eye protection/face protection.</p> <p>Response</p> <p>P303 + P361 + P533 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.</p> <p>P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p>
ERPG-1 (ppm)	2 mg
ERPG-2 (ppm)	10 mg
ERPG-3 (ppm)	30 mg

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	0.13
Lowest median lethal concentration (LC50) on crustacean (mg/l)	29
Lowest median lethal concentration (LC50) on fishes (mg/l)	16
Highest no observed effect concentration (NOEC) on algae (mg/l)	0.13
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	0.15
Highest no observed effect concentration (NOEC) on fishes (mg/l)	0.025
Assessment factor (AF)	1000 on the short term 500 on the long term
Predicted No Effect Concentration (PNEC) (µg/l)	0.13 [µg/l] on the short term 0.05 [µg/l] on the long term

Tall Oil

CAS Number: 8002-26-4

Also known as: Tall Oil, Huile De Tall

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 8002-26-4

Physical chemical data

Physical State (25°C)	Liquid
Solubility (g/L)	0 [g/L] at a temperature of 20°C and salinity of 0‰ 0 [g/L] at a temperature of 25°C and salinity of 0‰
Flash Point (Pensky-Martens closed cup) (°C)	182.2

Behaviour at sea

Log kow	6.91
Log koc	5.429
Biodegradation in estuary environment (Half-life) (days)	1.844

Additional data

MARPOL pollution category	Category	Description
	Other Substances	Substances which have been evaluated and found to fall outside Category X, Y or Z because they are considered to present no harm to marine resources, human health, amenities or other legitimate uses of the sea when discharged into the sea from tank cleaning of deballasting operations. The discharge of bilge or ballast water or other residues or mixtures containing these substances are not subject to any requirements of MARPOL Annex II.

Transportation data

Reactivity data

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	ED - Evaporator/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

Ecotoxicity

TALL OIL SOAP (disproportionated solution)

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1040 [Kg/m ³] at a temperature of 20°C
Boiling Point (°C)	100
Vapour Pressure (Pa)	2400 [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Transportation data

Reactivity data

GESAMP Hazard profile

Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

TALLOW

CAS Number: 61789-97-7

Also known as: Tallow, Suif

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 61789-97-7

Physical chemical data

Physical State (20°C)	Solid
Physical State (25°C)	Solid
Density (kg/m ³)	870 [Kg/m ³] at a temperature of 20°C
Solubility (g/L)	0 [g/L] at a temperature of 20°C and salinity of 0‰ 0 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	829
Melting Point (°C)	31
Vapour Pressure (Pa)	266 [Pa] at a temperature of 20°C
Flash Point (Pensky-Martens closed cup) (°C)	265
Henry's constant (mol/(m ³ ·Pa))	1.49

Behaviour at sea

Persistence (days)	1.9
Log k _{ow}	23.3
Log k _{oc}	10
Biodegradation in estuary environment (Half-life) (days)	552

Additional data

Colour	dark yellow
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MARPOL pollution category	Category	Description
	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.

Transportation data

Cargo group	34
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	esters

Reactivity data

Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - $e < 1$, or $> ca. 7$, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	0 - Not irritating
Eye irritation/corrosivity (D2)	0 - Not irritating
Interference with coastal amenities (E2)	Fp - Persistent slick forming substance
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

TALLOW FATTY ACID

Also known as: ACIDE GRAS DE SUIF

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Vapour Pressure (Pa)	100 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	> 200 (E)
Flash Point (°C)	200 (E)

Behaviour at sea

Additional data

Transportation data

Family name esters

Reactivity data

Base(s) Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	0 - Not irritating
Eye irritation/corrosivity (D2)	0 - Not irritating
Interference with coastal amenities (E2)	Fp - Persistent slick forming substance

Effects on wildlife and bottom habitats (E3)

2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

TANNIC ACID

Also known as: ACIDE TANNIQUE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Solid
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Molar mass (g/mol)	1701
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Behaviour at sea

Additional data

Colour	light yellow to tan
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Odour	wax odour
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Transportation data

State	solid
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Temperature (°C)	ambient
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Pressure (Pa)	ambient
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Reactivity data

GESAMP Hazard profile

Human toxicity threshold

Ecotoxicity

Tert-AMYL ALCOHOL

UN Number: 1105

Also known as: ALCOOL AMYLIQUE TERTIAIRE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1105

Physical chemical data

Physical State (20°C)	Liquid
Molar mass (g/mol)	88.14
Boiling Point (°C)	102
Melting Point (°C)	-12
Flash Point (°C)	20

Behaviour at sea

Additional data

Transportation data

Package group	III
Cargo group	20
State	liquid
IMO class	3.3

Reactivity data

Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m3)	100 ppm
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TEEL-2 (mg/m3)	100 ppm
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TEEL-3 (mg/m3)	100 ppm
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Ecotoxicity

Tert-Amyl Methyl Ether

CAS Number: 994-05-8

Also known as: 2-Methoxy-2-Methyl-Butane, Methyl-Tert-Pentyl Ether, 1,1-Dimethylpropyl Methyl Ether, Tame, Tert-Amyl Methyl Ether, Tertioamymethylether

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number	994-05-8
Formula	C ₆ H ₁₄ O

Physical chemical data

Physical State (25°C)	Liquid
Molar mass (g/mol)	102.174
Solubility (g/L)	2640 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	86.1
Melting Point (°C)	-80
Critical molar volume (m ³ /mol)	0.000374
Critical temperature (°C)	535
Critical pressure (Pa)	3200000
Flash Point (Pensky-Martens closed cup) (°C)	-7
Lower explosivity limit (LEL) (volume %)	1.1
Upper explosivity limit (UEL) (volume %)	7.4
Specific heat capacity (J/(Kg·K))	2949
Henry's constant (mol/(m ³ ·Pa))	133.7

Behaviour at sea

Log kow	1.92
Log koc	1.36
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Biodegradation in marine environment (Half-life) (days)	Not biodegradable
Bioconcentration factor (BCF)	5

Additional data

MARPOL pollution category

Category	Description
X	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a major hazard to either marine resources or human health and, therefore, justify the prohibition of the discharge into the marine environment.

Transportation data

Reactivity data

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	0 - Not irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	ED - Evaporator/Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold



Hazard statements

Physical

H225 Highly flammable liquid and vapour.

Health

H302 Harmful if swallowed.

H336 May cause drowsiness or dizziness.

Precautionary statements	Prevention
	P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
	P243 Take precautionary measures against static discharge.
	P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
	P271 Use only outdoors or in a well-ventilated area.
	Response
	P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
	P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
	Storage
	P403 + P235 Store in a well-ventilated place. Keep cool.

Ecotoxicity

Lowest median lethal concentration (LC50) on crustacean (mg/l)	14
Lowest median lethal concentration (LC50) on fishes (mg/l)	580
Highest no observed effect concentration (NOEC) on algae (mg/l)	77
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	51
Highest no observed effect concentration (NOEC) on fishes (mg/l)	63.9
Assessment factor (AF)	50 on the long term
Predicted No Effect Concentration (PNEC) (µg/l)	68 [µg/l] on the long term

TERT-BUTYL ALCOHOL

UN Number: 1120 - CAS Number: 75-65-0

Also known as: ALCOOL BUTYLIQUE TERTIAIRE, Tert-BUTANOL, Tert-Butanol, 2-Methyl-2-Propanol, 2-Methylpropan-2-ol, Trimethylcarbinol, Tert-Butyl Alcohol, Alcool Tert-Butylique

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1120
CAS number	75-65-0
Formula	C ₄ H ₁₀ O

Physical chemical data

Physical State (20°C)	Liquid/Solid
Physical State (25°C)	Solid
Density (kg/m ³)	800 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	5.4647 [cSt] at a temperature of 25°C
Molar mass (g/mol)	74.12
Density of gas (kg/m ³)	3.35
Solubility (g/L)	1000000 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	83
Melting Point (°C)	25
Critical molar volume (m ³ /mol)	0.000275
Critical temperature (°C)	506.2
Critical pressure (Pa)	3972000
Vapour Pressure (Pa)	4000 [Pa] at a temperature of 20°C 5600 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	470
Flash Point (°C)	10
Flash Point (Pensky-Martens closed cup) (°C)	11
Lower explosivity limit (LEL) (volume %)	2.3
Upper explosivity limit (UEL) (volume %)	8
Vapor enthalpy (J/Kg)	527111 [J/Kg] at a temperature of 82.4°C 629916 [J/Kg] at a temperature of 25°C
Specific heat capacity (J/(Kg·K))	2949

Henry's constant (mol/(m ³ ·Pa))	0.92
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Behaviour at sea

Log k _{ow}	0.37
Log k _{oc}	0.32
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Bioconcentration factor (BCF)	5

Additional data

Colour	white crystals if solid				
Odour	sharp alcohol odour				
MARPOL pollution category	<table border="1"> <thead> <tr> <th>Category</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Z</td> <td>Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment.</td> </tr> </tbody> </table>	Category	Description	Z	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment.
Category	Description				
Z	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment.				

Transportation data

Package group	II
Cargo group	20
Temperature (°C)	ambient
Family name	alcohols, glycols
IMO class	3.2

Reactivity data

Water	No
Abilities	Miscible in water.
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	Yes
Oxidizing agents	Yes
Combustibles	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight

Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	ED - Evaporator/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



IDHL	1600
Hazard statements	Physical
	H225 Highly flammable liquid and vapour.
	Health
	H319 Causes serious eye irritation.
	H332 Harmful if inhaled.
	H335 May cause respiratory irritation.

Precautionary statements	Prevention
	P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
	P233 Keep container tightly closed.
	P240 Ground/bond container and receiving equipment.
	P241 Use explosion-proof electrical/ventilating/lighting/.../equipment.
	P242 Use only non-sparking tools.
	P243 Take precautionary measures against static discharge.
	P280 Wear protective gloves/protective clothing/eye protection/face protection.
	Response
	P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
	P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
	P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P312 Call a POISON CENTER or doctor/physician if you feel unwell.
	P337 + P313 If eye irritation persists: Get medical advice/attention.
	P370 + P378 In case of fire: Use ... for extinction.
	Storage
	P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
	P403 + P235 Store in a well-ventilated place. Keep cool.
	P405 Store locked up.
	Disposal
	P501 Dispose of contents/container to ...

TLV-TWA	100
TEEL-1 (mg/m3)	150 ppm
TEEL-2 (mg/m3)	1600 ppm
TEEL-3 (mg/m3)	1600 ppm

Ecotoxicity

Lowest median lethal concentration (LC50) on fishes (mg/l)	3550
Highest no observed effect concentration (NOEC) on algae (mg/l)	976
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	100
Highest no observed effect concentration (NOEC) on fishes (mg/l)	332
Assessment factor (AF)	500 on the short term
Predicted No Effect Concentration (PNEC) (µg/l)	200 [µg/l] on the short term

TETRACHLOROETHANE

UN Number: 1702 - CAS Number: 79-34-5

Also known as: ACETYLENE TETRACHLORIDE, BONOFORM, CELLON

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1702
CAS number	79-34-5

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1595 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	167.85
Density of gas (kg/m ³)	7.482
Boiling Point (°C)	146.5
Melting Point (°C)	-44
Vapour Pressure (Pa)	12100 [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Colour	colourless to pale yellow
Odour	weak odour

Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	36
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	halogenated hydrocarb
IMO class	6.1

Reactivity data

Water	No
Acid(s)	No
Base(s)	No
Metal(s) and alloys	No
Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	2 - ≥ 2 and < 3
Bioaccumulation in BCF (A1B)	2 - ≥ 10 and < 100
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	2 - Irritating
Interference with coastal amenities (E2)	SD - Sinker/Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

IDHL	150
TEEL-2 (mg/m3)	30
TEEL-3 (mg/m3)	100

Ecotoxicity

TETRAETHYL DITHIOPYROPHOSPHATE (dry, liquid or mixtures)

UN Number: 1704

Also known as: DITHIOPYROPHOSPHATE DE TETRAETHYLE (solide, liquide ou en mélange)

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1704

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1190 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	322.3

Behaviour at sea

Additional data

Colour	colourless
Odour	sweet odour

Transportation data

Package group	II
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	under pressure
IMO class	6.1

Reactivity data

Water	Yes
Acid(s)	No
Base(s)	No
Metal(s) and alloys	Yes

Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m3)	0.5
TEEL-2 (mg/m3)	3.5
TEEL-3 (mg/m3)	10

Ecotoxicity

TETRAETHYL LEAD

UN Number: 1649 - CAS Number: 78-00-2

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1649
CAS number	78-00-2

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1633 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	322.44
Density of gas (kg/m ³)	14.45
Boiling Point (°C)	180
Melting Point (°C)	-28
Vapour Pressure (Pa)	27 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	320
Flash Point (°C)	80
Lower explosivity limit (LEL) (volume %)	1.8

Behaviour at sea

Persistence (days)	3.1
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Additional data

Colour	dyed distinctive colour
Marine pollutant	P

Transportation data

State	liquid
Temperature (°C)	ambient
Pressure (Pa)	under pressure
IMO class	6.1

Reactivity data

Water	No
Acid(s)	No
Base(s)	No
Metal(s) and alloys	Yes
Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	4 - ≥ 4 and < 5
Bioaccumulation in BCF (A1B)	5 - ≥ 4000
Bioaccumulation (A1)	5 - Very high potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	5 - Very highly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	3 - Moderately high
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	4 - High
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TLV-TWA	0.005
TEEL-1 (mg/m3)	0.468
TEEL-2 (mg/m3)	0.781
TEEL-3 (mg/m3)	62.4

Ecotoxicity

TETRAETHYL PYROPHOSPHATE

Also known as: BLADAN

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1180 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	290.2
Vapour Pressure (Pa)	10100 [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Colour	colourless to yellow
Odour	sweet odour
Standard behavior classification	DE, D, SD

Transportation data

State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient

Reactivity data

Water	Yes
Acid(s)	No
Base(s)	No
Metal(s) and alloys	No
Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m3) 0.15

Ecotoxicity

TETRAETHYLENE GLYCOL

CAS Number: 112-60-7

Also known as: BIS-k2-(2-HYDROXYETHOXY)ETHYL ETHER

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 112-60-7

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1120 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	194,23
Boiling Point (°C)	327
Melting Point (°C)	-6
Vapour Pressure (Pa)	10 [Pa] at a temperature of 20°C
Flash Point (°C)	182

Behaviour at sea

Additional data

Colour	colourless to straw
Odour	mild

Transportation data

Cargo group	40
State	liquid
Temperature (°C)	ambient
Family name	glycol ethers

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes

Organic substance	Yes
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GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	1 - Is a floater; and/or is slightly acutely toxic; and/or is mildly irritant to skin and/or eyes

Human toxicity threshold

TEEL-1 (mg/m3)	350
TEEL-2 (mg/m3)	500
TEEL-3 (mg/m3)	500

Ecotoxicity

TETRAETHYLENEPENTAMINE

UN Number: 2320

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 2320

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	998 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	189
Density of gas (kg/m ³)	8.386
Boiling Point (°C)	340
Melting Point (°C)	-30
Ignition Temperature (°C)	321
Flash Point (°C)	163
Lower explosivity limit (LEL) (volume %)	0.8
Upper explosivity limit (UEL) (volume %)	4.6

Behaviour at sea

Additional data

Colour	yellow
Odour	weak fruit odour

Transportation data

Transport mode	Bulk, Packaged
Package group	III
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	aliphatic amines

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	No
Metal(s) and alloys	No
Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	Yes

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m3)	15
TEEL-2 (mg/m3)	350
TEEL-3 (mg/m3)	500

Ecotoxicity

TETRAHYDROFURAN

UN Number: 2056 - CAS Number: 109-99-9

Also known as: Thf, Diethylnexide, Tetramethyleneoxide, Tetrahydrofuran, Tetrahydrofurane

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2056
CAS number	109-99-9
Formula	C ₄ H ₈ O

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	888 [Kg/m ³] at a temperature of 20°C 883.3 [Kg/m ³] at a temperature of 25°C
Kinematic viscosity (cSt)	0.6 [cSt] at a temperature of 20°C
Molar mass (g/mol)	72.1
Density of gas (kg/m ³)	3.225
Solubility (g/L)	10000000 [g/L] at a temperature of 20°C and salinity of 0‰
Boiling Point (°C)	66
Melting Point (°C)	-108
Critical molar volume (m ³ /mol)	0.000224
Critical temperature (°C)	540.5
Critical pressure (Pa)	5190000
Surface tension (mN/m)	26.4 [mN/m] at a temperature of 25°C
Vapour Pressure (Pa)	20260 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	260
Flash Point (°C)	-17
Flash Point (Pensky-Martens closed cup) (°C)	-14.5
Flash Point (Cleveland open cup) (°C)	-20
Lower explosivity limit (LEL) (volume %)	2
Upper explosivity limit (UEL) (volume %)	11.8
Vapor enthalpy (J/Kg)	413419 [J/Kg] at a temperature of 65°C 443452 [J/Kg] at a temperature of 25°C

Combustion enthalpy (J/Kg)	34880000
Specific heat capacity (J/(Kg·K))	1720
Henry's constant (mol/(m ³ ·Pa))	7.09

Behaviour at sea

Log K _{ow}	0.46
Log K _{oc}	1.03
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Bioconcentration factor (BCF)	3

Additional data

Colour	colourless				
Odour	ammonia odour				
MARPOL pollution category	<table border="1"> <thead> <tr> <th>Category</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Z</td> <td>Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment.</td> </tr> </tbody> </table>	Category	Description	Z	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment.
Category	Description				
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Standard behavior classification	DE				

Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	41
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	under pressure
Family name	ethers

Reactivity data

Water	No
Abilities	Miscible in water.
Acid(s)	Yes
Base(s)	No
Metal(s) and alloys	No
Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	No
Notable risks	May form explosive peroxides.

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - $e < 1$, or $> ca.7$, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	DE - Dissolver/Evaporator
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold



IDHL	20000	
Hazard statements	Physical	
	H225 Highly flammable liquid and vapour.	
	Health	
	H302 Harmful if swallowed.	
	H319 Causes serious eye irritation.	
	H335 May cause respiratory irritation.	
Precautionary statements	Prevention	
	P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.	
	P233 Keep container tightly closed.	
	P280 Wear protective gloves/protective clothing/eye protection/face protection.	
	Response	
	P370 + P378 In case of fire: Use ... for extinction.	
	Disposal	
	P501 Dispose of contents/container to ...	
	TLV-TWA	200
	ERPG-1 (ppm)	100
ERPG-2 (ppm)	500	
ERPG-3 (ppm)	5000	

Ecotoxicity

Lowest median lethal concentration (LC50) on crustacean (mg/l)	5930
Lowest median lethal concentration (LC50) on fishes (mg/l)	2160
Highest no observed effect concentration (NOEC) on fishes (mg/l)	216
Assessment factor (AF)	500 on the short term
Predicted No Effect Concentration (PNEC) (µg/l)	432 [µg/l] on the short term

TETRAHYDRONAPHTHALENE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	974 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	132.21
Boiling Point (°C)	208
Melting Point (°C)	-35
Vapour Pressure (Pa)	133 [Pa] at a temperature of 20°C
Flash Point (°C)	284
Lower explosivity limit (LEL) (volume %)	0.8

Behaviour at sea

Additional data

Colour	colourless
Odour	weak fruit odour

Transportation data

Cargo group	32
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	aromatic hydrocarbons

Reactivity data

Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	3 - ≥3 and <4
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Bioaccumulation in BCF (A1B)	3 - ≥ 100 and < 500
Bioaccumulation (A1)	3 - Moderate potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	0 - Not irritating
Interference with coastal amenities (E2)	F - Floating substance, not likely to evaporate or to dissolve quickly
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

TEEL-1 (mg/m3)	0.6 ppm
TEEL-2 (mg/m3)	5 ppm
TEEL-3 (mg/m3)	20 ppm

Ecotoxicity

TETRAMETHYL LEAD

UN Number: 1649

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1649

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1999 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	267.33
Density of gas (kg/m ³)	11.87
Boiling Point (°C)	110
Melting Point (°C)	-136
Vapour Pressure (Pa)	3332 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	320
Lower explosivity limit (LEL) (volume %)	1.8

Behaviour at sea

Persistence (days) 3.1

Additional data

Colour	dyed distinctive colour
Odour	musty, turpentine odour

Transportation data

State	liquid
Temperature (°C)	ambient
Pressure (Pa)	under pressure
IMO class	6.1

Reactivity data

Water	No
Acid(s)	No

Base(s)	No
Metal(s) and alloys	No
Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

IDHL	3.5
TLV-TWA	0.007
TEEL-1 (mg/m3)	0.581
TEEL-3 (mg/m3)	51.6

Ecotoxicity

TETRAZOL-1-ACETIC ACID

UN Number: 407

Also known as: ACIDE TETRAZOL-1-ACETIQUE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 407

Physical chemical data

Physical State (20°C) Solid

Behaviour at sea

Additional data

Odour fruit odour

Transportation data

State solid

Temperature (°C) ambient

Pressure (Pa) ambient

Family name nitric acid

IMO class 1.4 C

Reactivity data

Water No

Acid(s) Yes

Base(s) Yes

Metal(s) and alloys No

Oxidizing agents No

Reducing agents No

Combustibles No

Organic substance Yes

GESAMP Hazard profile

Human toxicity threshold

Ecotoxicity

THORIUM NITRATE

UN Number: 2976

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 2976

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	990 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	555.2
Radioactivity (mrems/hr)	5.3

Behaviour at sea

Additional data

Colour	white
Odour	odourless

Transportation data

State	solid
Temperature (°C)	ambient
Pressure (Pa)	ambient

Reactivity data

Water	Yes
Acid(s)	No
Base(s)	No
Metal(s) and alloys	Yes
Static electricity	Yes
Oxidizing agents	No
Reducing agents	Yes
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

TEEL-2 (mg/m3)	15
TEEL-3 (mg/m3)	25

Ecotoxicity

TITANIUM TETRACHLORIDE

UN Number: 1838

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1838

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1726 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	189.71
Boiling Point (°C)	136
Melting Point (°C)	-24.1
Vapour Pressure (Pa)	1300 [Pa] at a temperature of 20°C

Behaviour at sea

Persistence (days) 1.6

Additional data

Colour	colourless to light yellow
Odour	odourless
Standard behavior classification	D, SD

Transportation data

Package group	II
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	under pressure

Reactivity data

Water	Yes
Acid(s)	No
Base(s)	No
Metal(s) and alloys	Yes

Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

ERPG-1 (ppm)	5 mg
ERPG-2 (ppm)	20 mg
ERPG-3 (ppm)	100 mg

Ecotoxicity

TOLUENE

UN Number: 1294 - CAS Number: 108-88-3

Also known as: ANTISAL LA, BENZENE METHYL, Methylbenzene, Methylbenzol, Phenylmethane, Toluol, Toluene

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1294
CAS number	108-88-3
Formula	C ₇ H ₈

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m³)	867 [Kg/m ³] at a temperature of 20°C 880.9 [Kg/m ³] at a temperature of 5°C 875.7 [Kg/m ³] at a temperature of 10°C 868.3 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	0.68 [cSt] at a temperature of 20°C 0.64 [cSt] at a temperature of 25°C 2.2477 [cSt] at a temperature of 5°C 2.0669 [cSt] at a temperature of 10°C 2.0845 [cSt] at a temperature of 20°C
Molar mass (g/mol)	92.14
Density of gas (kg/m³)	4.1
Solubility (g/L)	515 [g/L] at a temperature of 20°C and salinity of 0‰ 535 [g/L] at a temperature of 25°C and salinity of 0‰ 387 [g/L] at a temperature of 25°C and salinity of 35‰ 160 [g/L] at a temperature of 20°C and salinity of 0‰ 150 [g/L] at a temperature of 20°C and salinity of 5‰ 110 [g/L] at a temperature of 20°C and salinity of 30‰
Boiling Point (°C)	110.8
Melting Point (°C)	-95

Surface tension (mN/m)	28.52 [mN/m] at a temperature of 20°C
	27.93 [mN/m] at a temperature of 25°C
	29.8 [mN/m] at a temperature of 5.6°C
	28.66 [mN/m] at a temperature of 11.6°C
	28.01 [mN/m] at a temperature of 18.1°C
Interfacial tension (mN/m)	36.1 [mN/m] at a temperature of 25°C and salinity of 0‰
Vapour Pressure (Pa)	2932 [Pa] at a temperature of 20°C
	3800 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	535
Flash Point (Pensky-Martens closed cup) (°C)	4
Flash Point (Cleveland open cup) (°C)	12.8
Lower explosivity limit (LEL) (volume %)	1.27
Upper explosivity limit (UEL) (volume %)	7.1
Vapor enthalpy (J/Kg)	360065 [J/Kg] at a temperature of 110.6°C
	412480 [J/Kg] at a temperature of 25°C
Combust enthalpy (J/Kg)	40500000
Specific heat capacity (J/(Kg·K))	1707
Combustion efficiency (%)	71
Mass flow rate of the combustion surface (Kg/(m²·s))	0.11
Rad fraction (%)	60
Henry's constant (mol/(m³·Pa))	673

Behaviour at sea

Persistence (days)	1.6
Log kow	2.65
Log koc	2.25
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Biodegradation in marine environment (Half-life) (days)	30
Bioconcentration factor (BCF)	90

Additional data

Colour	colourless				
Odour	irritating odour				
MARPOL pollution category	<table border="1"> <thead> <tr> <th>Category</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Y</td> <td>Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.</td> </tr> </tbody> </table>	Category	Description	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.
Category	Description				
Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.				

Standard behavior classification	FE
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Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	32
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	aromatic hydrocarbons
IMO class	3.2

Reactivity data

Acid(s)	Yes
Static electricity	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	2 - ≥ 2 and < 3
Bioaccumulation in BCF (A1B)	2 - ≥ 10 and < 100
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	E - Evaporator
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



IDHL	2000
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Hazard statements	Physical	
	H225	Highly flammable liquid and vapour.
	Health	
	H304	May be fatal if swallowed and enters airways.
	H315	Causes skin irritation.
	H336	May cause drowsiness or dizziness.
	H361	Suspected of damaging fertility or the unborn child.
	H373	May cause damage to organs through prolonged or repeated exposure, exposure cause the hazard:

Precautionary statements	Prevention	
	P202	Do not handle until all safety precautions have been read and understood.
	P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
	P243	Take precautionary measures against static discharge.
	P260	Do not breathe dust/fume/gas/mist/vapours/spray.
	P280	Wear protective gloves/protective clothing/eye protection/face protection.
	Response	
	P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
	P303 + P361 + P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
	P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P308 + P313	IF exposed or concerned: Get medical advice/attention.	
	P331	Do NOT induce vomiting.

TLV-TWA	100
ERPG-1 (ppm)	50
ERPG-2 (ppm)	300
ERPG-3 (ppm)	1000

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	9.4
Lowest median lethal concentration (LC50) on crustacean (mg/l)	3.5
Lowest median lethal concentration (LC50) on fishes (mg/l)	5.4
Highest no observed effect concentration (NOEC) on algae (mg/l)	1.2
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	0.74
Highest no observed effect concentration (NOEC) on fishes (mg/l)	1.4
Assessment factor (AF)	100 on the short term 100 on the long term
Predicted No Effect Concentration (PNEC) (µg/l)	35 [µg/l] on the short term 7.4 [µg/l] on the long term

TOLUENE DIISOCYANATE

UN Number: 2078 - CAS Number: 584-84-9

Also known as: DIISOCYANATE DE TOLUENE, Toluene-2,4-Diisocyanate, 2,4-Diisocyanate-1-Methylbenzene, Toluene Diisocyanate

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2078
CAS number	584-84-9
Formula	C ₉ H ₆ N ₂ O ₂

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	1220 [Kg/m ³] at a temperature of 20°C 1224.4 [Kg/m ³] at a temperature of 25°C
Molar mass (g/mol)	174.16
Density of gas (kg/m ³)	7.74
Solubility (g/L)	37.6 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	250
Melting Point (°C)	14
Surface tension (mN/m)	25 [mN/m] at a temperature of 25°C
Vapour Pressure (Pa)	3998 [Pa] at a temperature of 20°C 3 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	620
Flash Point (°C)	135
Flash Point (Pensky-Martens closed cup) (°C)	127
Flash Point (Cleveland open cup) (°C)	132
Lower explosivity limit (LEL) (volume %)	0.9
Upper explosivity limit (UEL) (volume %)	9.5
Combustion enthalpy (J/Kg)	23900000
Specific heat capacity (J/(Kg·K))	1653
Henry's constant (mol/(m ³ ·Pa))	1.11



Behaviour at sea

Persistence (days)	2.7
Log kow	3.74
Log koc	3.87
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	1

Additional data

Colour	colourless to light yellow				
Odour	pleasant odour				
MARPOL pollution category	<table><thead><tr><th>Category</th><th>Description</th></tr></thead><tbody><tr><td>Y</td><td>Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.</td></tr></tbody></table>	Category	Description	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.
Category	Description				
Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.				
Standard behavior classification	D, SD				

Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	12
State	liquid
Temperature (°C)	24  - 38 
Pressure (Pa)	under pressure
Family name	isocyanates
IMO class	6.1

Reactivity data

Water	Yes
Abilities	Reacts with water.
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	No
Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	3 - ≥ 3 and < 4
Bioaccumulation in BCF (A1B)	1 - ≥ 1 and < 10
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	4 - High
Skin irritation/corrosivity (D1)	3 - Corrosive
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



IDHL	10
Hazard statements	<p>Health</p> <p>H315 Causes skin irritation.</p> <p>H317 May cause an allergic skin reaction.</p> <p>H319 Causes serious eye irritation.</p> <p>H330 Fatal if inhaled.</p> <p>H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.</p> <p>H335 May cause respiratory irritation.</p> <p>H351 Suspected of causing cancer.</p> <p>Environmental</p> <p>H412 Harmful to aquatic life with long lasting effects.</p>

Precautionary statements**Prevention**

- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P284 Wear respiratory protection.

Response

- P308 + P313 IF exposed or concerned: Get medical advice/attention.

Storage

- P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

Disposal

- P501 Dispose of contents/container to ...

TLV-TWA 0.005

TEEL-1 (mg/m3) 0.75 ppm

TEEL-2 (mg/m3) 2 ppm

TEEL-3 (mg/m3) 2 ppm

Ecotoxicity

Lowest median lethal concentration (LC50) on fishes (mg/l) 164

Highest no observed effect concentration (NOEC) on crustacean (mg/l) 1.1

TOLUENEDIAMINE

Also known as: 2,4-DIAMINOTOLUENE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	1000 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	122,17
Boiling Point (°C)	280
Melting Point (°C)	88/96
Vapour Pressure (Pa)	10 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	450
Flash Point (°C)	210

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless

Transportation data

Package group	III
State	solid
Family name	aromatic amines

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Human toxicity threshold

Ecotoxicity

TOLUIDINES

UN Number: 1708

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1708

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	998 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	107.2
Density of gas (kg/m ³)	5.031
Boiling Point (°C)	200
Melting Point (°C)	-16
Vapour Pressure (Pa)	26793 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	480
Flash Point (°C)	85

Behaviour at sea

Additional data

Colour	colourless to yellow-brown
Odour	sharp, sweet, fruit odour

Transportation data

Transport mode	Bulk, Packaged
Package group	II
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
IMO class	6.1

Reactivity data

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation in BCF (A1B)	1 - ≥ 1 and < 10
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	2 - Moderate
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	FD - Floater/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

IDHL	100
TEEL-1 (mg/m3)	5 ppm
TEEL-2 (mg/m3)	5ppm
TEEL-3 (mg/m3)	50 ppm

Ecotoxicity

TRIBUTYL PHOSPHATE

CAS Number: 126-73-8

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 126-73-8

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	980 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	266.3
Density of gas (kg/m ³)	11.87
Boiling Point (°C)	289 (decomp.)
Melting Point (°C)	< -80
Vapour Pressure (Pa)	10 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	410
Flash Point (°C)	146
Lower explosivity limit (LEL) (volume %)	1.3
Upper explosivity limit (UEL) (volume %)	7.1

Behaviour at sea

Additional data

Colour	colourless to pale yellow
Odour	odourless

Transportation data

Cargo group	34
State	liquid
Family name	esters

Reactivity data

Water	No
Acid(s)	Yes

Oxidizing agents	Yes
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GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	4 - ≥ 4 and < 5
Bioaccumulation in BCF (A1B)	2 - ≥ 10 and < 100
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	F - Floating substance, not likely to evaporate or to dissolve quickly
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

IDHL	30
TLV-TWA	0.2
TEEL-1 (mg/m3)	2 ppm
TEEL-2 (mg/m3)	15 ppm
TEEL-3 (mg/m3)	30 ppm

Ecotoxicity

TRICHLOROETHYLENE

UN Number: 1710 - CAS Number: 79-01-6

Also known as: ACETYLENE TRICHLORIDE, CHLORO ETHANE, CHLOROTEN, CHLORO THANE NU, CHLORO THENE INHIBITED, CHLORO THENE NU, CHLORO THENE VG, CHLORYLEA, CHLORYLEN, CIRCOSOLV, CRAWHASPOL, DAKERON, DENSINFLUAT, DOW-TRI, Trichloroethene, 1,1,2-Trichloroethene, Trichloroethylene

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1710
CAS number	79-01-6
Formula	C ₂ HCl ₃

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	1460 [Kg/m ³] at a temperature of 20°C 1464.2 [Kg/m ³] at a temperature of 25°C
Kinematic viscosity (cSt)	0.38 [cSt] at a temperature of 25°C
Molar mass (g/mol)	131.39
Density of gas (kg/m ³)	5.805
Solubility (g/L)	1100 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	87
Melting Point (°C)	-86
Critical temperature (°C)	544.2
Critical pressure (Pa)	5020000
Surface tension (mN/m)	29.3 [mN/m] at a temperature of 20°C
Vapour Pressure (Pa)	133330 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	410
Flash Point (°C)	32
Flash Point (Pensky-Martens closed cup) (°C)	90
Lower explosivity limit (LEL) (volume %)	8
Upper explosivity limit (UEL) (volume %)	10.5
Vapor enthalpy (J/Kg)	238987 [J/Kg] at a temperature of 87.21°C 260830 [J/Kg] at a temperature of 25°C

Combustion enthalpy (J/Kg)	6560000
Specific heat capacity (J/(Kg·K))	947
Henry's constant (mol/(m ³ ·Pa))	998

Behaviour at sea

Log K _{ow}	2.42
Log K _{oc}	1.78
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Bioconcentration factor (BCF)	39

Additional data

Colour	colourless
Odour	sweet odour

MARPOL pollution category	Category	Description
	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	36
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	under pressure
Family name	halogenated hydrocarb
IMO class	6.1

Reactivity data

Base(s)	Yes
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GESAMP Hazard profile

Bioaccumulation in logP _{ow} (A1A)	2 - ≥2 and <3
Bioaccumulation in BCF (A1B)	2 - ≥10 and <100
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic

Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	SD - Sinker/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



IDHL	1000
Hazard statements	<p>Health</p> <p>H319 Causes serious eye irritation.</p> <p>H336 May cause drowsiness or dizziness.</p> <p>H341 Suspected of causing genetic defects.</p> <p>H350 May cause cancer.</p> <p>Environmental</p> <p>H412 Harmful to aquatic life with long lasting effects.</p>
Precautionary statements	<p>Prevention</p> <p>P202 Do not handle until all safety precautions have been read and understood.</p> <p>P261 Avoid breathing dust/fume/gas/mist/vapours/spray.</p> <p>P273 Avoid release to the environment.</p> <p>P281 Use personal protective equipment as required.</p> <p>Response</p> <p>P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.</p> <p>P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P308 + P313 IF exposed or concerned: Get medical advice/attention.</p> <p>P391 Collect spillage.</p> <p>Storage</p> <p>P405 Store locked up.</p> <p>Disposal</p> <p>P501 Dispose of contents/container to ...</p>
TLV-TWA	50
ERPG-1 (ppm)	100
ERPG-2 (ppm)	500

Ecotoxicity

Lowest median lethal concentration (LC50) on fishes (mg/l)	28.3
Highest no observed effect concentration (NOEC) on algae (mg/l)	63
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	0.15
Highest no observed effect concentration (NOEC) on fishes (mg/l)	5.76
Assessment factor (AF)	500 on the short term
Predicted No Effect Concentration (PNEC) ($\mu\text{g/l}$)	11 [$\mu\text{g/l}$] on the short term

TRICRESYL PHOSPHATE (1% ortho isomer or more)

UN Number: 2574 - CAS Number: 1330-78-5

Also known as: o-CRESYLPHOSPHATE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2574
CAS number	1330-78-5

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1200 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	368.4
Density of gas (kg/m ³)	16.38
Boiling Point (°C)	410
Melting Point (°C)	-25
Vapour Pressure (Pa)	10 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	385
Flash Point (°C)	223

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless
Marine pollutant	P

Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	34

State	liquid
Temperature (°C)	ambient
Family name	esters
IMO class	6.1

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	5 - ≥ 5 and \leq ca.7
Bioaccumulation in BCF (A1B)	3 - ≥ 100 and < 500
Bioaccumulation (A1)	3 - Moderate potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	4 - Very high
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

TLV-TWA	0.0065
TEEL-1 (mg/m3)	0.3 ppm
TEEL-2 (mg/m3)	0.6 ppm
TEEL-3 (mg/m3)	40 ppm

Ecotoxicity

TRICRESYLPHOSPHATE (>3% ortho-isomer)

UN Number: 2574

Also known as: DURAD (T)

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 2574

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1160 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	368
Density of gas (kg/m ³)	16.77
Boiling Point (°C)	410
Melting Point (°C)	-30
Vapour Pressure (Pa)	1333 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	400
Flash Point (°C)	210

Behaviour at sea

Persistence (days) 3.1

Additional data

Colour	colourless
Odour	sweet odour
Marine pollutant	P

Transportation data

Package group	II
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
IMO class	6.1

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m3)	0.3 ppm
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TEEL-2 (mg/m3)	0.6 ppm
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TEEL-3 (mg/m3)	40 ppm
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Ecotoxicity

TRIDECANOIC ACID

CAS Number: 638-53-9

Also known as: ACIDE TRIDECANOIQUE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 638-53-9

Physical chemical data

Physical State (20°C) Solid

Melting Point (°C) 41/42

Flash Point (°C) > 110

Behaviour at sea

Additional data

Colour white

Transportation data

Family name organic acids

Reactivity data

Water No

Acid(s) Yes

Base(s) Yes

Oxidizing agents Yes

Reducing agents Yes

Organic substance Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A) 5 - ≥ 5 and \leq ca.7

Bioaccumulation (A1) 5 - Very high potential to bioaccumulate

Biodegradation (A2) R - Readily biodegradable

Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	Fp - Persistent slick forming substance
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

TRIDECANOL

Also known as: ALCOHOLS C13+

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	846 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	200.37
Density of gas (kg/m ³)	8.9
Boiling Point (°C)	274
Melting Point (°C)	33
Vapour Pressure (Pa)	1300 [Pa] at a temperature of 20°C
Flash Point (°C)	121

Behaviour at sea

Additional data

Colour	white
Odour	mild, pleasant
Standard behavior classification	FE

Transportation data

Cargo group	20
Temperature (°C)	ambient
Family name	alcohols, glycols

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	Yes

Oxidizing agents	Yes
Combustibles	Yes
Organic substance	Yes

GESAMP Hazard profile

Human toxicity threshold

Ecotoxicity

TRIETHANOLAMINE

CAS Number: 102-71-6

Also known as: DALTOGEN

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 102-71-6

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1130 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	149.19
Density of gas (kg/m ³)	6.579
Boiling Point (°C)	360
Melting Point (°C)	21
Ignition Temperature (°C)	324
Flash Point (°C)	179
Lower explosivity limit (LEL) (volume %)	3.6
Upper explosivity limit (UEL) (volume %)	7.2

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless

Transportation data

State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	alkanolamines

Reactivity data

Acid(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - $e < 1$, or $> ca. 7$, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

TRIETHYL PHOSPHATE

CAS Number: 78-40-0

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 78-40-0

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1070 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	182.16
Density of gas (kg/m ³)	8.1
Boiling Point (°C)	209
Melting Point (°C)	-56.4
Vapour Pressure (Pa)	34 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	452
Flash Point (°C)	116
Lower explosivity limit (LEL) (volume %)	1.7
Upper explosivity limit (UEL) (volume %)	10

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless

Transportation data

Cargo group	34
State	liquid
Temperature (°C)	ambient
Family name	esters

Reactivity data

Water	Yes
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Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

TEEL-1 (mg/m3)	200
TEEL-2 (mg/m3)	500
TEEL-3 (mg/m3)	500

Ecotoxicity

TRIETHYL PHOSPHITE

UN Number: 2323 - CAS Number: 122-52-1

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2323
CAS number	122-52-1

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	970 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	166.16
Density of gas (kg/m ³)	7.39
Boiling Point (°C)	155
Vapour Pressure (Pa)	131 [Pa] at a temperature of 20°C
Flash Point (°C)	44

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless
Standard behavior classification	F/FD

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	34
State	liquid
Temperature (°C)	ambient
Family name	esters
IMO class	3.3

Reactivity data

Water	Yes
Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - $e < 1$, or $> ca. 7$, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Specific Health Concern (D3)	Ss - Skin Sensitization
Interference with coastal amenities (E2)	FE - Floater/Evaporator
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

TEEL-1 (mg/m3)	6 ppm
TEEL-2 (mg/m3)	40 ppm
TEEL-3 (mg/m3)	200 ppm

Ecotoxicity

TRIETHYLAMINE

UN Number: 1296 - CAS Number: 121-44-8

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1296
CAS number	121-44-8

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	729 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	101.19
Density of gas (kg/m ³)	4.515
Boiling Point (°C)	89.7
Melting Point (°C)	-115
Vapour Pressure (Pa)	7198 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	230
Flash Point (°C)	-17
Lower explosivity limit (LEL) (volume %)	1.2

Behaviour at sea

Additional data

Colour	colourless
Odour	mild ammonia odour

Transportation data

Transport mode	Bulk, Packaged
Package group	II
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	aliphatic amines
IMO class	3.2

Reactivity data

Acid(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

IDHL	1000
TLV-TWA	10
TEEL-1 (mg/m3)	3 ppm
TEEL-2 (mg/m3)	3 ppm
TEEL-3 (mg/m3)	200 ppm

Ecotoxicity

TRIETHYLBENZENE

CAS Number: 25340-18-5

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 25340-18-5

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	861 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	162.27
Density of gas (kg/m ³)	5.354
Boiling Point (°C)	216

Behaviour at sea

Additional data

Colour	colourless
Odour	fish odour
Standard behavior classification	FD

Transportation data

Cargo group	32
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	aromatic hydrocarbons

Reactivity data

Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	5 - ≥ 5 and \leq ca.7
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Bioaccumulation (A1)	5 - Very high potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	F - Floating substance, not likely to evaporate or to dissolve quickly
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

TEEL-1 (mg/m3)	15 ppm
TEEL-2 (mg/m3)	125 ppm
TEEL-3 (mg/m3)	600 ppm

Ecotoxicity

TRIETHYLENE GLYCOL

CAS Number: 112-27-6

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 112-27-6

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1125 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	150.17
Density of gas (kg/m ³)	6.68
Boiling Point (°C)	288
Melting Point (°C)	-4
Vapour Pressure (Pa)	1299 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	370
Flash Point (°C)	177
Lower explosivity limit (LEL) (volume %)	0.9
Upper explosivity limit (UEL) (volume %)	9.2

Behaviour at sea

Additional data

Colour	colourless
Odour	weak chemical odour

Transportation data

State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient

Reactivity data

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	0 - Not irritating
Eye irritation/corrosivity (D2)	0 - Not irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	0 - Is not a floater; and does not pose any known health hazards

Human toxicity threshold

TEEL-1 (mg/m3)	500
TEEL-2 (mg/m3)	500
TEEL-3 (mg/m3)	500

Ecotoxicity

TRIETHYLENETETRAMINE

UN Number: 2259 - CAS Number: 112-24-3

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2259
CAS number	112-24-3

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	982 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	146.24
Density of gas (kg/m ³)	6.579
Boiling Point (°C)	277.6
Melting Point (°C)	-35
Ignition Temperature (°C)	338
Flash Point (°C)	135
Lower explosivity limit (LEL) (volume %)	1.1

Behaviour at sea

Additional data

Colour	light straw to amber
Odour	mild odour

Transportation data

Transport mode	Bulk, Packaged
Package group	II
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	aliphatic amines

Reactivity data

Acid(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Skin irritation/corrosivity (D1)	3 - Corrosive
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Specific Health Concern (D3)	Ss - Skin Sensitization
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TEEL-1 (mg/m3)	7.5 ppm
TEEL-2 (mg/m3)	60 ppm
TEEL-3 (mg/m3)	150 ppm

Ecotoxicity

TRISOPROPANOLAMINE

CAS Number: 122-20-3

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 122-20-3

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	1020 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	191.27
Density of gas (kg/m ³)	8.51
Boiling Point (°C)	300/305
Melting Point (°C)	58
Vapour Pressure (Pa)	< 500 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	320
Flash Point (°C)	160
Lower explosivity limit (LEL) (volume %)	0.8 (E)
Upper explosivity limit (UEL) (volume %)	5.1 (E)

Behaviour at sea

Additional data

Colour	white
Odour	slight ammonia
Standard behavior classification	FD

Transportation data

State	solid
Family name	alkanolamines

Reactivity data

Water	No
Acid(s)	Yes

Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - $e < 1$, or $> ca. 7$, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	FD - Floater/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

Ecotoxicity

TRISOPROPYLATED PHENYL PHOSPHATES

UN Number: 3082 - CAS Number: 68937-41-7

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	3082
CAS number	68937-41-7

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1100 [Kg/m ³] at a temperature of 20°C
Boiling Point (°C)	220/270
Melting Point (°C)	-26
Vapour Pressure (Pa)	10 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	510/550
Flash Point (°C)	200/245

Behaviour at sea

Additional data

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	34
State	liquid

Reactivity data

Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	5 - ≥ 5 and \leq ca.7
Bioaccumulation in BCF (A1B)	5 - ≥ 4000
Bioaccumulation (A1)	5 - Very high potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	0 - Not irritating
Eye irritation/corrosivity (D2)	0 - Not irritating
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly
Effects on wildlife and bottom habitats (E3)	0 - Is not a floater; and does not pose any known health hazards

Human toxicity threshold

Ecotoxicity

TRIMETHYL HEXAMETHYLENE DIAMINE (2,2,4 and 2,4,4)

UN Number: 2327 - CAS Number: 26520-58-0

Also known as: 1,6-DIAMINO-2,2,4(2,4,4)-TRIMETHYLHEXANE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2327
CAS number	26520-58-0

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	867 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	158.29
Density of gas (kg/m ³)	7.06
Boiling Point (°C)	232
Melting Point (°C)	-80
Vapour Pressure (Pa)	< 7 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	350
Flash Point (°C)	127
Lower explosivity limit (LEL) (volume %)	1.2

Behaviour at sea

Additional data

Colour	colourless
Odour	faint amine

Transportation data

Transport mode	Bulk, Packaged
Package group	III
State	liquid

Family name	aliphatic amines
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Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

Ecotoxicity

TRIMETHYL HEXAMETHYLENE DIISOCYANATE (2,2,4 and 2,4,4)

UN Number: 2328 - CAS Number: 28679-16-5

Also known as: DIISOCYANATE DE TRIMETHYLHEXAMETHYLENE (2,2,4 et 2,4,4), 1,6-DIISOCYANATO-2,2,4(2,4,4)-TRIMETHYLHEXANE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2328
CAS number	28679-16-5

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1010 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	210.27
Density of gas (kg/m ³)	9.42
Boiling Point (°C)	291
Melting Point (°C)	-80
Vapour Pressure (Pa)	10 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	440
Flash Point (°C)	> 200 (E)
Lower explosivity limit (LEL) (volume %)	1.1

Behaviour at sea

Additional data

Colour	colourless or yellowish
Odour	odourless

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	12

State	liquid
Family name	isocyanates
IMO class	6.1

Reactivity data

Water	Yes
Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - $e < 1$, or $> ca. 7$, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

TRIMETHYL PHOSPHATE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1197 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	140.07
Boiling Point (°C)	197
Melting Point (°C)	-46
Vapour Pressure (Pa)	110 [Pa] at a temperature of 20°C
Flash Point (°C)	107

Behaviour at sea

Additional data

Transportation data

State	liquid
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Reactivity data

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m ³)	15 ppm
TEEL-2 (mg/m ³)	60 ppm
TEEL-3 (mg/m ³)	60 ppm

Ecotoxicity

TRIMETHYL PHOSPHITE

UN Number: 2329 - CAS Number: 121-45-9

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2329
CAS number	121-45-9

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1046 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	124.08
Density of gas (kg/m ³)	5.55
Boiling Point (°C)	111
Melting Point (°C)	-78
Vapour Pressure (Pa)	3200 (25C) [Pa] at a temperature of 20°C
Ignition Temperature (°C)	250
Flash Point (°C)	28

Behaviour at sea

Additional data

Colour	colourless
Odour	pungent, pyridine-like

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	34
State	liquid
Family name	esters
IMO class	3.3

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes
Combustibles	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly

Human toxicity threshold

TEEL-1 (mg/m3)	60 ppm
TEEL-2 (mg/m3)	500 ppm
TEEL-3 (mg/m3)	750 ppm

Ecotoxicity

TRIMETHYLACETIC ACID

CAS Number: 75-98-9

Also known as: ACIDE TRIMETHYLACETIQUE, alpha,alpha-DIMETHYLPROPIONIC ACID

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 75-98-9

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	900 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	102.13
Density of gas (kg/m ³)	4.50 (E)
Boiling Point (°C)	164
Melting Point (°C)	36
Vapour Pressure (Pa)	10 [Pa] at a temperature of 20°C
Flash Point (°C)	63

Behaviour at sea

Additional data

Colour	coloured
Odour	odourless

Transportation data

Family name organic acids

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation in BCF (A1B)	1 - ≥ 1 and < 10
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	Fp - Persistent slick forming substance
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

TRIMETHYLAMINE (40% solution in water)

UN Number: 1297 - CAS Number: 75-50-3

Also known as: N,N-DIMETHYLMETHANAMINE Solution

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1297
CAS number	75-50-3

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	900 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	59.1
Density of gas (kg/m ³)	2.58
Boiling Point (°C)	30
Melting Point (°C)	-3
Vapour Pressure (Pa)	62000 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	190
Upper explosivity limit (UEL) (volume %)	11.6

Behaviour at sea

Additional data

Colour	colourless
Odour	pungent
Standard behavior classification	DE

Transportation data

Transport mode	Bulk, Packaged
Ship type	2 (sol. < 30%)
Package group	I/II
Family name	miscell. water solut.
IMO class	3.1

Reactivity data

Water	No
Acid(s)	Yes
Metal(s) and alloys	Yes (Al, Zn)
Oxidizing agents	Yes
Reducing agents	Yes
Combustibles	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	DE - Dissolver/Evaporator
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

ERPG-1 (ppm)	0.1
ERPG-2 (ppm)	100
ERPG-3 (ppm)	500

Ecotoxicity

TRIMETHYLAMINE anhydrous

UN Number: 1083 - CAS Number: 75-50-3

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1083
CAS number	75-50-3

Physical chemical data

Physical State (20°C)	Gas
Density (kg/m ³)	2.58 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	59.11
Density of gas (kg/m ³)	2.58
Boiling Point (°C)	3.1
Melting Point (°C)	-117
Vapour Pressure (Pa)	62000 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	190
Upper explosivity limit (UEL) (volume %)	12

Behaviour at sea

Additional data

Colour	colourless
Odour	ammonia odour
Standard behavior classification	GD

Transportation data

State	liq.compr.gas
Temperature (°C)	ambient
Pressure (Pa)	under pressure
IMO class	2(2.1)

Reactivity data

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	DE - Dissolver/Evaporator
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TLV-TWA	10
ERPG-1 (ppm)	0.1
ERPG-2 (ppm)	100
ERPG-3 (ppm)	500

Ecotoxicity

TRIMETHYLCHLOROSILANE

UN Number: 1298

Also known as: CHLOROTRIMETHYLSILANE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1298

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	846 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	108.7
Density of gas (kg/m ³)	4.77
Boiling Point (°C)	57
Melting Point (°C)	-58
Vapour Pressure (Pa)	7360 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	395
Flash Point (°C)	-28
Lower explosivity limit (LEL) (volume %)	1.8

Behaviour at sea

Additional data

Colour	colourless
Odour	sharp irritating

Transportation data

Package group	II
State	liquid
Temperature (°C)	ambient
IMO class	3.1

Reactivity data

Water

Yes

GESAMP Hazard profile

Human toxicity threshold

ERPG-2 (ppm)	20
ERPG-3 (ppm)	150

Ecotoxicity

TRIMETHYLENE DIAMINE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	888 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	74.12
Melting Point (°C)	-12
Flash Point (°C)	48

Behaviour at sea

Additional data

Transportation data

State liquid

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

Ecotoxicity

TRIMETHYLOL PROPANE POLYETHOXYLATE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Vapour Pressure (Pa)	10 [Pa] at a temperature of 20°C
Flash Point (°C)	183

Behaviour at sea

Additional data

Transportation data

Reactivity data

GESAMP Hazard profile

Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible

Human toxicity threshold

Ecotoxicity

TRINITROANISOLE

UN Number: 213

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 213

Physical chemical data

Physical State (20°C) Solid

Behaviour at sea

Additional data

Odour perceptible odour

Transportation data

State solid

Temperature (°C) ambient

Pressure (Pa) ambient

IMO class 1.1 D

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

Ecotoxicity

TRIPROPYLENE GLYCOL

CAS Number: 24800-44-0

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 24800-44-0

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1020 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	192.3
Density of gas (kg/m ³)	8.51
Boiling Point (°C)	273
Melting Point (°C)	-45
Vapour Pressure (Pa)	130 (96°C) [Pa] at a temperature of 20°C
Flash Point (°C)	140
Lower explosivity limit (LEL) (volume %)	0.8

Behaviour at sea

Additional data

Colour	colourless
Odour	characteristic

Transportation data

Cargo group	40
State	liquid
Temperature (°C)	ambient
Family name	glycol ethers

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes

Organic substance	Yes
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GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	0 - Not irritating
Eye irritation/corrosivity (D2)	0 - Not irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	0 - Is not a floater; and does not pose any known health hazards

Human toxicity threshold

TEEL-1 (mg/m3)	5 ppm
TEEL-2 (mg/m3)	35 ppm
TEEL-3 (mg/m3)	150 ppm

Ecotoxicity

TRIXYLYL PHOSPHATE

UN Number: 3082 - CAS Number: 25155-23-1

Also known as: COALITE NTP, DIMETHYLPHENOL PHOSPHATE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	3082
CAS number	25155-23-1

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1130/1155 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	410.4
Density of gas (kg/m ³)	18.32
Boiling Point (°C)	248/265
Melting Point (°C)	-20
Ignition Temperature (°C)	343
Flash Point (°C)	199

Behaviour at sea

Additional data

Colour	slightly coloured
Odour	slight odour

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	34
State	liquid
Temperature (°C)	ambient
Family name	esters

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	5 - ≥ 5 and \leq ca.7
Bioaccumulation in BCF (A1B)	4 - ≥ 500 and < 4000
Bioaccumulation (A1)	4 - High potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	1 - Low
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

Ecotoxicity

TURPENTINE

UN Number: 1299

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1299

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	860 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	136
Density of gas (kg/m ³)	6.063
Boiling Point (°C)	155.3
Melting Point (°C)	-55
Vapour Pressure (Pa)	500 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	220
Flash Point (°C)	33
Lower explosivity limit (LEL) (volume %)	0.8

Behaviour at sea

Persistence (days) 1.6

Additional data

Colour	colourless
Standard behavior classification	FE

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	30
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	olefins

IMO class	3.3
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Reactivity data

Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Human toxicity threshold

IDHL	1500
TLV-TWA	100
TEEL-1 (mg/m3)	20 ppm
TEEL-2 (mg/m3)	20 ppm
TEEL-3 (mg/m3)	800 ppm

Ecotoxicity

TURPENTINE SUBSTITUTE

UN Number: 1300

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1300

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	780 [Kg/m ³] at a temperature of 20°C
Density of gas (kg/m ³)	5.35
Boiling Point (°C)	155
Vapour Pressure (Pa)	5865 [Pa] at a temperature of 20°C
Flash Point (°C)	42
Lower explosivity limit (LEL) (volume %)	0.8

Behaviour at sea

Additional data

Colour	colourless
Odour	penetrat. unpleasant odour

Transportation data

Transport mode	Bulk, Packaged
Package group	II/III
Cargo group	33
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	miscell. hydroc. mixt
IMO class	3.2/3.3

Reactivity data

Acid(s)	Yes
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Oxidizing agents

Yes

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m3)	60 ppm
TEEL-2 (mg/m3)	400 ppm
TEEL-3 (mg/m3)	2000 ppm

Ecotoxicity

UNDECANOIC ACID

CAS Number: 112-37-8

Also known as: ACIDE UNDECANOIQUE, 1-DECANECARBOXYLIC ACID

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 112-37-8

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m3)	891 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	186.3
Density of gas (kg/m3)	8.28
Boiling Point (°C)	228
Melting Point (°C)	28.5
Flash Point (°C)	> 110

Behaviour at sea

Additional data

Colour	white
Odour	odourless
Standard behavior classification	F/FE/E

Transportation data

State	solid
Temperature (°C)	ambient
Family name	organic acids

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes

Metal(s) and alloys	Yes (common metals)
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	4 - ≥ 4 and < 5
Bioaccumulation (A1)	4 - High potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	Fp - Persistent slick forming substance
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

UNDECYL ALCOHOL

UN Number: 3082 - CAS Number: 112-42-5

Also known as: ALCOHOL C-11(UNDECYLIC)

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	3082
CAS number	112-42-5

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	835 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	172.3
Boiling Point (°C)	245
Melting Point (°C)	15.9
Flash Point (°C)	93

Behaviour at sea

Additional data

Colour	colourless
Odour	mild
Standard behavior classification	F/FE/E

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	20
Temperature (°C)	ambient
Family name	alcohols, glycols

Reactivity data

Water	No
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Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	4 - ≥ 4 and < 5
Bioaccumulation (A1)	4 - High potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	Fp - Persistent slick forming substance
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

Undecylbenzene

CAS Number: 67774-74-7

Also known as: Benzene, C10-C13 Alkyl Derivs, Undecylbenzene, Benzene, Derives En Alkyle C10-13

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number	67774-74-7
Formula	$C_6H_5C_nH_{2n+1}$ (n=10-13)

Physical chemical data

Physical State (25°C)	Liquid
Molar mass (g/mol)	239
Solubility (g/L)	0 [g/L] at a temperature of 25°C and salinity of 0‰
Boiling Point (°C)	298
Melting Point (°C)	-70
Henry's constant (mol/(m ³ ·Pa))	95

Behaviour at sea

Log kow	7.5
Log koc	4.34
Bioconcentration factor (BCF)	35

Additional data

MARPOL pollution category	Category	Description
	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.

Transportation data

Reactivity data

GESAMP Hazard profile

Interference with coastal amenities (E2)

G - Gas

Human toxicity threshold



Hazard statements	Health
	H304 May be fatal if swallowed and enters airways.
Precautionary statements	Response
	P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
	P331 Do NOT induce vomiting.
	Storage
	P405 Store locked up.
	Disposal
	P501 Dispose of contents/container to ...

Ecotoxicity

Lowest median lethal concentration (LC50) on crustacean (mg/l)	0.01
Lowest median lethal concentration (LC50) on fishes (mg/l)	> 1000
Highest no observed effect concentration (NOEC) on algae (mg/l)	> 1000
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	0.01

URANIUM HEXAFLUORIDE

UN Number: 2977

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 2977

Physical chemical data

Physical State (20°C)	Liquid
Molar mass (g/mol)	352
Boiling Point (°C)	56
Vapour Pressure (Pa)	14200 [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Odour mild odour

Transportation data

State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

ERPG-1 (ppm)	5 mg				
ERPG-2 (ppm)	15 mg				
ERPG-3 (ppm)	30 mg				
	10 min	30 min	60 min	4 hrs	8 hrs
AEGL-1 (ppm)	3.6	3.6	3.6		

AEGL-2 (ppm)	28	19	9.6	2.4	1.2
AEGL-3 (ppm)	216	72	36		4.5

Ecotoxicity

URANYL NITRATE

UN Number: 2981

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 2981

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	2807 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	502.13
Melting Point (°C)	59
Radioactivity (mrems/hr)	5.3

Behaviour at sea

Additional data

Colour light yellow

Transportation data

State	solid
Temperature (°C)	ambient
Pressure (Pa)	ambient

Reactivity data

Water	Yes
Acid(s)	No
Base(s)	No
Metal(s) and alloys	Yes
Oxidizing agents	No
Reducing agents	Yes
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

IDHL	2 (as U)
TLV-TWA	0.02 (U)
TEEL-1 (mg/m3)	0.993
TEEL-2 (mg/m3)	0.993
TEEL-3 (mg/m3)	16.6

Ecotoxicity

URANYL SULFATE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Solid
Molar mass (g/mol)	420.2

Behaviour at sea

Additional data

Colour	yellow
Odour	odourless

Transportation data

State	solid
Temperature (°C)	ambient
Pressure (Pa)	ambient

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

IDHL	2 (as U)
TLV-TWA	0.02 (U)

Ecotoxicity

UREA ammonium nitrate solution

CAS Number: 57-13-6

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 57-13-6

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1330 [Kg/m ³] at a temperature of 20°C
Boiling Point (°C)	107
Vapour Pressure (Pa)	2000 [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Colour	colourless
Odour	slight ammonia

Transportation data

State	liquid
Temperature (°C)	ambient
Family name	ammonia

Reactivity data

Water	No
Acid(s)	Yes
Metal(s) and alloys	Yes (Cu)
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	0 - No measurable BCF

Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	1 - Is a floater; and/or is slightly acutely toxic; and/or is mildly irritant to skin and/or eyes

Human toxicity threshold

TEEL-1 (mg/m3)	10
TEEL-2 (mg/m3)	10
TEEL-3 (mg/m3)	500

Ecotoxicity

UREA ammonium phosphate solution

CAS Number: 57-13-6

Also known as: Amide Of Carbonic Acid, Carbamide, Carbamimidic Acid, Carbonyl Diamide, Carbonyldiamide, Carbonyldiamine, Isourea, Urea, Uree

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number	57-13-6
Formula	CH ₄ N ₂ O

Physical chemical data

Physical State (25°C)	Solid
Kinematic viscosity (cSt)	1.49 [cSt] at a temperature of 20°C
Molar mass (g/mol)	60.06
Solubility (g/L)	1080000 [g/L] at a temperature of 20°C and salinity of 0‰ 1230000 [g/L] at a temperature of 25°C and salinity of 0‰
Melting Point (°C)	132.7
Combustion enthalpy (J/Kg)	9050000
Combustion efficiency (%)	95
Mass flow rate of the combustion surface (Kg/(m²·s))	0.01
Rad fraction (%)	22
Henry's constant (mol/(m³·Pa))	0

Behaviour at sea

Log kow	0
Log koc	0.9
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Biodegradation in marine environment (Half-life) (days)	50
Bioconcentration factor (BCF)	1.1

Additional data

MARPOL pollution category

Category	Description
Z	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment.

Transportation data

Reactivity data

Abilities	Miscible in water.
Notable risks	Reacts with some compounds.

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation in BCF (A1B)	0 - No measurable BCF
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	1 - Slight
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	1 - Is a floater; and/or is slightly acutely toxic; and/or is mildly irritant to skin and/or eyes

Human toxicity threshold

Ecotoxicity

Lowest median lethal concentration (LC50) on crustacean (mg/l)	3910
Lowest median lethal concentration (LC50) on fishes (mg/l)	67
Highest no observed effect concentration (NOEC) on algae (mg/l)	1050
Assessment factor (AF)	47 on the short term
Predicted No Effect Concentration (PNEC) (µg/l)	1000 [µg/l] on the short term

VALERALDEHYDE

UN Number: 2058 - CAS Number: 590-86-3

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2058
CAS number	590-86-3

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	811 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	86.13
Density of gas (kg/m ³)	3.87
Boiling Point (°C)	103.2
Melting Point (°C)	-91
Vapour Pressure (Pa)	6665 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	222
Flash Point (°C)	12
Lower explosivity limit (LEL) (volume %)	1.4
Upper explosivity limit (UEL) (volume %)	7.2

Behaviour at sea

Additional data

Colour	colourless
Odour	odourless

Transportation data

Package group	II
Cargo group	19
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	aldehydes

IMO class	3.2
Reactivity data	
Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

TLV-TWA	50
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Ecotoxicity

VEGETABLE PROTEIN solution (hydrolised)

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	> 1000 [Kg/m ³] at a temperature of 20°C
Vapour Pressure (Pa)	2000 [Pa] at a temperature of 20°C

Behaviour at sea

Additional data

Colour	colourless to yellowish
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Transportation data

Cargo group	43
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Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	0 - Non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Eye irritation/corrosivity (D2)	0 - Not irritating
Interference with coastal amenities (E2)	D - Dissolver

Human toxicity threshold

Ecotoxicity

VINYL ACETATE inhibited

UN Number: 1301 - CAS Number: 108-05-4

Also known as: ACETATE DE VINYLE, ACETIC ACID ETHENYL ESTER, ACETIC ACID VINYL ESTER, 1-ACETOXY ETHYLENE, Acetic Acid, Ethylene Ester, 1-Acetoxyethylene, Ethenyl Acetate, Ethenyl Ethanoate, Vinyl A Monomer, Vinyl Acetate Monomer, Vinyl Ethanoate, Vinyl Acetate

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1301
CAS number	108-05-4
Formula	C ₄ H ₆ O ₂

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	934 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	0.46 [cSt] at a temperature of 20°C
Molar mass (g/mol)	86.09
Density of gas (kg/m ³)	3.844
Solubility (g/L)	20000 [g/L] at a temperature of 20°C and salinity of 0‰
Boiling Point (°C)	73.1
Melting Point (°C)	-100
Surface tension (mN/m)	24 [mN/m] at a temperature of 20°C
Interfacial tension (mN/m)	30 [mN/m] at a temperature of 20°C and salinity of 0‰
Vapour Pressure (Pa)	11997 [Pa] at a temperature of 20°C 15300 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	425
Flash Point (°C)	-8
Flash Point (Pensky-Martens closed cup) (°C)	-8
Flash Point (Cleveland open cup) (°C)	-5
Lower explosivity limit (LEL) (volume %)	2.6
Upper explosivity limit (UEL) (volume %)	13.4
Vapor enthalpy (J/Kg)	379000 [J/Kg] at a temperature of 72.7°C

Combust enthalpy (J/Kg)	22700000
Specific heat capacity (J/(Kg·K))	1969
Combustion efficiency (%)	98
Mass flow rate of the combustion surface (Kg/(m ² ·s))	0.14
Rad fraction (%)	23
Henry's constant (mol/(m ³ ·Pa))	51.6

Behaviour at sea

Log kow	0.7
Log koc	1.4
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Biodegradation in marine environment (Half-life) (days)	50
Bioconcentration factor (BCF)	0.16

Additional data

Colour	colourless
Odour	weak fat odour

MARPOL pollution category	Category	Description
	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.

Standard behavior classification	ED
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Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	13
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	under pressure
Family name	vinyl acetate
IMO class	3.2

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes

Metal(s) and alloys	No
Static electricity	Yes
Oxidizing agents	No
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - $e < 1$, or $> ca. 7$, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	ED - Evaporator/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold



Hazard statements	Physical	
	H225	Highly flammable liquid and vapour.
	Health	
	H332	Harmful if inhaled.
	H335	May cause respiratory irritation.
	H351	Suspected of causing cancer.
	Environmental	
H412	Harmful to aquatic life with long lasting effects.	

Precautionary statements**Prevention**

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P233 Keep container tightly closed.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting/.../equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
- P271 Use only outdoors or in a well-ventilated area.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P281 Use personal protective equipment as required.

Response

- P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P308 + P313 IF exposed or concerned: Get medical advice/attention.
- P312 Call a POISON CENTER or doctor/physician if you feel unwell.
- P370 + P378 In case of fire: Use ... for extinction.

Storage

- P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
- P403 + P235 Store in a well-ventilated place. Keep cool.
- P405 Store locked up.

Disposal

- P501 Dispose of contents/container to ...

TLV-TWA	10
ERPG-1 (ppm)	575
ERPG-2 (ppm)	500

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	12.7
Lowest median lethal concentration (LC50) on crustacean (mg/l)	12.6
Lowest median lethal concentration (LC50) on fishes (mg/l)	14
Highest no observed effect concentration (NOEC) on algae (mg/l)	6
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	45
Highest no observed effect concentration (NOEC) on fishes (mg/l)	0.6
Assessment factor (AF)	5000 on the short term 500 on the long term
Predicted No Effect Concentration (PNEC) (µg/l)	2.52 [µg/l] on the short term 1.1 [µg/l] on the long term

VINYL CHLORIDE inhibited or stabilized

UN Number: 1086

Also known as: CHLORETHENE, CHLOROETHYLENE, CHLORURE DE VINYLE stabilisé

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1086

Physical chemical data

Physical State (20°C)	Gas
Density (kg/m ³)	2.786 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	62.5
Density of gas (kg/m ³)	2.786
Boiling Point (°C)	-13.6
Melting Point (°C)	-154
Vapour Pressure (Pa)	340000 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	473
Flash Point (°C)	-77
Lower explosivity limit (LEL) (volume %)	3.6
Upper explosivity limit (UEL) (volume %)	33

Behaviour at sea

Additional data

Colour	colourless
Odour	pleasant, fruit odour
Standard behavior classification	GD, G

Transportation data

Transport mode	Gas, Packaged
Ship type	2G, 2PG
Cargo group	35
State	liquefied gas

Temperature (°C)	ambient
Pressure (Pa)	ambient
Family name	vinyl halides
IMO class	2(2.1)

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	No
Metal(s) and alloys	No
Static electricity	Yes
Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Human toxicity threshold

ERPG-1 (ppm)	500
ERPG-2 (ppm)	5000
ERPG-3 (ppm)	20000

Ecotoxicity

VINYL ETHYL ETHER inhibited

UN Number: 1302 - CAS Number: 109-92-2

Also known as: Ethoxyethylene, Ethyl Vinyl Ether, Vinyl Ethyl Ether, Ether Etyhlique De Vinyle

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1302
CAS number	109-92-2
Formula	C ₄ H ₈ O

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	759 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	72.1
Density of gas (kg/m ³)	3.225
Solubility (g/L)	10000 [g/L] at a temperature of 37°C and salinity of 0‰
Boiling Point (°C)	35.6
Melting Point (°C)	-115
Vapour Pressure (Pa)	58900 [Pa] at a temperature of 20°C 68128 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	201
Flash Point (°C)	< 10
Lower explosivity limit (LEL) (volume %)	1.7
Upper explosivity limit (UEL) (volume %)	28
Henry's constant (mol/(m ³ ·Pa))	547

Behaviour at sea

Log k _{ow}	1.04
Log k _{oc}	0.99

Additional data

Colour	colourless
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Odour	characteristic, disagreeable				
MARPOL pollution category	<table border="1"> <thead> <tr> <th>Category</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Z</td> <td>Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment.</td> </tr> </tbody> </table>	Category	Description	Z	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment.
Category	Description				
Z	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment.				

Transportation data

Transport mode	Bulk, Packaged
State	liquid
Family name	ethers
IMO class	3.1

Reactivity data

Oxidizing agents	Yes
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GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	1 - ≥ 1 and < 2
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	1 - Practically non-toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	1 - Mildly irritating
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	E - Evaporator
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Hazard statements	Environmental
	H412 Harmful to aquatic life with long lasting effects.

Precautionary statements**Prevention**

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

Response

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

TEEL-1 (mg/m3)

50 ppm

TEEL-2 (mg/m3)

350 ppm

TEEL-3 (mg/m3)

1500 ppm

Ecotoxicity

VINYL NEODECANOATE

CAS Number: 45115-34-2

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

CAS number 45115-34-2

Physical chemical data

Physical State (20°C)	Liquid
Molar mass (g/mol)	198.3
Density of gas (kg/m ³)	14.33
Melting Point (°C)	-20
Ignition Temperature (°C)	309
Flash Point (°C)	> 79

Behaviour at sea

Additional data

Colour	colourless
Odour	pleasant

Transportation data

Cargo group	13
State	liquid
Temperature (°C)	ambient
Family name	vinyl acetate

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Metal(s) and alloys	Yes (Cu, Zn)
Oxidizing agents	Yes
Organic substance	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	5 - ≥ 5 and \leq ca.7
Bioaccumulation (A1)	5 - Very high potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Skin irritation/corrosivity (D1)	3 - Corrosive
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	F - Floating substance, not likely to evaporate or to dissolve quickly
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

Ecotoxicity

VINYL TOLUENES inhibited (mixed isomers)

UN Number: 2618 - CAS Number: 25013-15-4

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2618
CAS number	25013-15-4

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	897 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	118.18
Density of gas (kg/m ³)	5.289
Boiling Point (°C)	167.9
Melting Point (°C)	-77
Vapour Pressure (Pa)	339908 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	494
Flash Point (°C)	53
Lower explosivity limit (LEL) (volume %)	0.8
Upper explosivity limit (UEL) (volume %)	11

Behaviour at sea

Additional data

Colour	colourless
Odour	sweet odour

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	30
State	liquid
Temperature (°C)	ambient
Pressure (Pa)	ambient

Family name	olefins
IMO class	3.3

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	No
Metal(s) and alloys	No
Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	3 - ≥ 3 and < 4
Bioaccumulation in BCF (A1B)	3 - ≥ 100 and < 500
Bioaccumulation (A1)	3 - Moderate potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Eye irritation/corrosivity (D2)	1 - Mildly irritating
Interference with coastal amenities (E2)	F - Floating substance, not likely to evaporate or to dissolve quickly
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

IDHL	5000
TLV-TWA	50

Ecotoxicity

VINYLLIDENE CHLORIDE inhibited

UN Number: 1303 - CAS Number: 75-35-4

Also known as: CHLORURE DE VINYLLIDENE

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1303
CAS number	75-35-4

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1210 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	96.95
Density of gas (kg/m ³)	4.322
Boiling Point (°C)	31.8
Melting Point (°C)	-122
Vapour Pressure (Pa)	66500 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	440
Flash Point (°C)	-10
Lower explosivity limit (LEL) (volume %)	5.6
Upper explosivity limit (UEL) (volume %)	16

Behaviour at sea

Additional data

Colour	colourless
Odour	unpleasant odour

Transportation data

Transport mode	Bulk,Gas,Packaged
Cargo group	35
State	liquid
Temperature (°C)	ambient

Pressure (Pa)	under pressure
Family name	vinyl halides
IMO class	3.1

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	No
Metal(s) and alloys	No
Oxidizing agents	Yes
Reducing agents	No
Combustibles	No
Organic substance	No

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	2 - ≥ 2 and < 3
Bioaccumulation in BCF (A1B)	1 - ≥ 1 and < 10
Bioaccumulation (A1)	1 - Very low potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	2 - Slightly toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	SD - Sinker/Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

TLV-TWA	10
ERPG-2 (ppm)	500
ERPG-3 (ppm)	1000

Ecotoxicity

WHITE SPIRIT aromatic low (15-20%)

UN Number: 2319

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 2319

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	970 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	132.2
Density of gas (kg/m ³)	5.9
Boiling Point (°C)	150/190
Melting Point (°C)	1.194444444
Vapour Pressure (Pa)	200 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	210
Flash Point (°C)	-0.782608696
Lower explosivity limit (LEL) (volume %)	0.6
Upper explosivity limit (UEL) (volume %)	6.5

Behaviour at sea

Additional data

Colour	colourless
Odour	characteristic

Transportation data

Transport mode	Bulk, Packaged
Package group	III
Cargo group	33
State	liquid
Temperature (°C)	ambient
Family name	miscell. hydroc. mixt
IMO class	3.2

Reactivity data

Water	No
Acid(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	4 - ≥ 4 and < 5
Bioaccumulation (A1)	4 - High potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	2 - Moderate
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	F - Floating substance, not likely to evaporate or to dissolve quickly
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

Ecotoxicity

XYLENES meta

UN Number: 1307 - CAS Number: 133-20-7

Also known as: CHROMAR, DIMETHYLBENZENES, Dimethylbenzene, Methyltoluene, Xylol, Xylene, Xylene, Mixed Isomers, Xylenes (Mixed), Total Xylenes, Xylenes, Total, Mixed Xylene, Xylene (Mixed Isomers), Xylenes (Mixture)

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	1307
CAS number	133-20-7
Formula	C ₈ H ₁₀

Physical chemical data

Physical State (20°C)	Liquid
Physical State (25°C)	Liquid
Density (kg/m ³)	864 [Kg/m ³] at a temperature of 20°C 879 [Kg/m ³] at a temperature of 5°C 874.3 [Kg/m ³] at a temperature of 10°C 867.7 [Kg/m ³] at a temperature of 20°C
Kinematic viscosity (cSt)	4.8 [cSt] at a temperature of 20°C 2.3891 [cSt] at a temperature of 5°C 2.3219 [cSt] at a temperature of 10°C 2.2012 [cSt] at a temperature of 20°C
Molar mass (g/mol)	106.16
Solubility (g/L)	175 [g/L] at a temperature of 20°C and salinity of 0‰ 130 [g/L] at a temperature of 20°C and salinity of 0‰ 120 [g/L] at a temperature of 20°C and salinity of 5‰ 100 [g/L] at a temperature of 20°C and salinity of 30‰
Boiling Point (°C)	139
Melting Point (°C)	-48
Critical temperature (°C)	619.9
Critical pressure (Pa)	3540000

Surface tension (mN/m)	29.8 [mN/m] at a temperature of 25°C
	29.04 [mN/m] at a temperature of 5.3°C
	27.88 [mN/m] at a temperature of 10°C
	26.96 [mN/m] at a temperature of 17.9°C
Vapour Pressure (Pa)	1330 [Pa] at a temperature of 20°C
	1070 [Pa] at a temperature of 25°C
Ignition Temperature (°C)	527
Flash Point (°C)	28
Flash Point (Pensky-Martens closed cup) (°C)	25
Flash Point (Cleveland open cup) (°C)	25
Lower explosivity limit (LEL) (volume %)	1.1
Upper explosivity limit (UEL) (volume %)	7
Vapor enthalpy (J/Kg)	335892 [J/Kg] at a temperature of 140°C
	401733 [J/Kg] at a temperature of 25°C
Combus enthalpy (J/Kg)	40831000
Henry's constant (mol/(m³·Pa))	7

Behaviour at sea

Persistence (days)	0.8
Log kow	3.12
Log koc	2.58
Aqueous photolysis (Half-life)	Not photolysable
Biodegradation in estuary environment (Half-life) (days)	Not hydrolysable
Biodegradation in marine environment (Half-life) (days)	Not biodegradable
Bioconcentration factor (BCF)	15

Additional data

MARPOL pollution category	Category	Description
	Y	Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment.
Standard behavior classification	FE	

Transportation data

Package group	II
IMO class	3.2/3.3

Reactivity data

Notable risks	Reacts with oxidizers Reacts with other compounds.
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GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	3 - ≥ 3 and < 4
Bioaccumulation (A1)	3 - Moderate potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	0 - Negligible
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Skin irritation/corrosivity (D1)	2 - Irritating
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	FE - Floater/Evaporator
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold



IDHL	1000	
Hazard statements	Physical	
	H226 Flammable liquid and vapour.	
	Health	
	H312 Harmful in contact with skin.	
	H315 Causes skin irritation. H332 Harmful if inhaled.	
Precautionary statements	Prevention	
	P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.	
	P243 Take precautionary measures against static discharge.	
	P260 Do not breathe dust/fume/gas/mist/vapours/spray.	
	P280 Wear protective gloves/protective clothing/eye protection/face protection.	
	Response	
	P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.	
	P332 + P313 If skin irritation occurs: Get medical advice/attention.	
	TLV-TWA	100
	TEEL-1 (mg/m3)	150 ppm
TEEL-2 (mg/m3)	200 ppm	
TEEL-3 (mg/m3)	900ppm	

Ecotoxicity

Lowest median lethal concentration (LC50) on algae (mg/l)	3.2
Lowest median lethal concentration (LC50) on crustacean (mg/l)	1.3
Lowest median lethal concentration (LC50) on fishes (mg/l)	2.6
Highest no observed effect concentration (NOEC) on algae (mg/l)	0.7
Highest no observed effect concentration (NOEC) on crustacean (mg/l)	1.2
Highest no observed effect concentration (NOEC) on fishes (mg/l)	> 1.3
Assessment factor (AF)	1000 on the short term 10000 on the long term
Predicted No Effect Concentration (PNEC) ($\mu\text{g/l}$)	1 [$\mu\text{g/l}$] on the short term 0.1 [$\mu\text{g/l}$] on the long term

XYLENOL

UN Number: 2261 - CAS Number: 1300-71-6

Also known as: CRESYLIC ACID, DIMETHYLPHENOL

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2261
CAS number	1300-71-6

Physical chemical data

Physical State (20°C)	Liquid/Solid
Density (kg/m ³)	1010 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	122.2
Boiling Point (°C)	212
Melting Point (°C)	-0.571428571
Vapour Pressure (Pa)	100 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	599
Flash Point (°C)	80/95
Lower explosivity limit (LEL) (volume %)	1.4

Behaviour at sea

Additional data

Colour	light yellowish brown
Odour	sweet tarry

Transportation data

Transport mode	Bulk, Packaged
Package group	II
Cargo group	21
Temperature (°C)	ambient
Family name	phenols, cresols
IMO class	6.1

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	2 - ≥ 2 and < 3
Bioaccumulation (A1)	2 - Low potential to bioaccumulate
Biodegradation (A2)	R - Readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	2 - Moderate
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	Fp - Persistent slick forming substance
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

Ecotoxicity

ZINC ALKARYL DITHIOPHOSPHATE (C7-C16)

Also known as: ALKARYLDITHIOPHOSPHATES (C7-C16) DE ZINC

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1000 [Kg/m ³] at a temperature of 20°C
Vapour Pressure (Pa)	100 [Pa] at a temperature of 20°C
Flash Point (°C)	150/210

Behaviour at sea

Additional data

Transportation data

Reactivity data

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	0 - e <1, or > ca.7, or Mol. Wt. > 1000
Bioaccumulation (A1)	0 - No potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Eye irritation/corrosivity (D2)	0 - Not irritating
Interference with coastal amenities (E2)	Fp - Persistent slick forming substance

Effects on wildlife and bottom habitats (E3)

2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

ZINC ALKYL DITHIOPHOSPHATE (C3-C14)

Also known as: ALKYLDITHIOPHOSPHATES (C3-C14) DE ZINC

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

Physical chemical data

Physical State (20°C)	Liquid
Density (kg/m ³)	1000/1100 [Kg/m ³] at a temperature of 20°C
Boiling Point (°C)	> 100
Melting Point (°C)	< 0
Vapour Pressure (Pa)	< 100 [Pa] at a temperature of 20°C
Ignition Temperature (°C)	260/370
Flash Point (°C)	150

Behaviour at sea

Additional data

Colour	yellow-brown
Odour	lub oil

Transportation data

Cargo group	34
State	liquid

Reactivity data

Water	No
Acid(s)	Yes
Base(s)	Yes
Oxidizing agents	Yes

GESAMP Hazard profile

Bioaccumulation in logPow (A1A)	5 - ≥5 and ≤ ca.7
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Bioaccumulation (A1)	5 - Very high potential to bioaccumulate
Biodegradation (A2)	NR - Not readily biodegradable
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	3 - Moderately toxic
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	0 - Negligible
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	0 - Negligible
Eye irritation/corrosivity (D2)	2 - Irritating
Interference with coastal amenities (E2)	S - Sinking substance that would deposit on the seabed, not likely to dissolve quickly
Effects on wildlife and bottom habitats (E3)	2 - Is a persistent floater; and/or is moderately acutely toxic; and/or is irritating to skin and/or eyes; and/or has long-term health effects other than carcinogenicity, mutagenicity or reprotoxicity; and/or is highly flammable; and/or is flammable and is a floater with evaporative properties

Human toxicity threshold

Ecotoxicity

ZINC ARSENATE

UN Number: 1712

Also known as: ARSENIATE DE ZINC

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1712

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	3309 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	866

Behaviour at sea

Additional data

Colour	colourless
Odour	sweet odour
Standard behavior classification	D, SD, S

Transportation data

Package group	II
State	solid
Temperature (°C)	ambient
Pressure (Pa)	ambient
IMO class	6.1

Reactivity data

GESAMP Hazard profile

Human toxicity threshold

Ecotoxicity

ZINC CHLORIDE anhydrous

UN Number: 2331 - CAS Number: 7646-85-7

Also known as: CHLORURE DE ZINC anhydre

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number	2331
CAS number	7646-85-7

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	2900 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	136.28
Boiling Point (°C)	732
Melting Point (°C)	285

Behaviour at sea

Additional data

Colour	white
Odour	odourless
Standard behavior classification	SD

Transportation data

Package group	III
State	solid
Temperature (°C)	ambient

Reactivity data

GESAMP Hazard profile

Bioaccumulation in BCF (A1B)	4 - ≥500 and <4000
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Bioaccumulation (A1)	4 - High potential to bioaccumulate
Acute aquatic toxicity (B1) (LC/EC/IC50 (mg/l))	4 - Highly toxic
Chronic aquatic toxicity (B2) (NOEC (mg/l))	1 - Low
Acute mammalian toxicity by swallowing (C1) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by skin penetration (C2) (LD50 (mg/kg))	1 - Slight
Acute mammalian toxicity by inhalation (C3) (LC50 (mg/l))	3 - Moderately high
Eye irritation/corrosivity (D2)	3 - Severely irritating, with irreversible corneal injury
Interference with coastal amenities (E2)	D - Dissolver
Effects on wildlife and bottom habitats (E3)	3 - Is highly acutely toxic; and/or is severely irritant or corrosive to skin or eyes; and/or is carcinogenic, mutagenic or reprotoxic; and/or is a floater or persistent floater with associated health effects

Human toxicity threshold

IDHL	850
TLV-TWA	0.2
TEEL-2 (mg/m3)	50
TEEL-3 (mg/m3)	50

Ecotoxicity

ZINC HYDROSULPHITE

UN Number: 1931

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1931

Physical chemical data

Physical State (20°C) Solid

Behaviour at sea

Additional data

Odour odourless

Transportation data

Package group III

State solid

Temperature (°C) ambient

Pressure (Pa) ambient

IMO class 4.2

Reactivity data

Water No

Acid(s) Yes

Base(s) No

Metal(s) and alloys No

Oxidizing agents No

Reducing agents No

Combustibles No

Organic substance No

GESAMP Hazard profile

Human toxicity threshold

Ecotoxicity

ZINC PHOSPHIDE

UN Number: 1714

Information on chemical

External resources

[CAMEO Chemical Database](#)

[WISER Substance List](#)

Description

UN number 1714

Physical chemical data

Physical State (20°C)	Solid
Density (kg/m ³)	4600 [Kg/m ³] at a temperature of 20°C
Molar mass (g/mol)	258.1
Boiling Point (°C)	1100
Melting Point (°C)	420

Behaviour at sea

Additional data

Colour	grey to black
Standard behavior classification	SD

Transportation data

State	solid
Temperature (°C)	ambient
Pressure (Pa)	under pressure
IMO class	4.3

Reactivity data

Water	Yes
Acid(s)	No
Base(s)	No
Metal(s) and alloys	No
Oxidizing agents	No
Reducing agents	No
Combustibles	No

GESAMP Hazard profile

Human toxicity threshold

TEEL-1 (mg/m3)	0.15 ppm
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TEEL-2 (mg/m3)	1 ppm
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TEEL-3 (mg/m3)	1.8 ppm
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Ecotoxicity