SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name: Eni PRECIS S 46

1.2 Relevant identified uses of the substance or mixture and uses advised against

General use: Hydraulic oil

1.3 Details of the supplier of the safety data sheet

Company name: Enilive Schmiertechnik GmbH
Street/POB-No.: Paradiesstraße 14
Postal Code, city: 97080 Würzburg
Germany
E-mail: info.wuerzburg@enilive.com
Telephone: +49 (0)931-90098-0
Telefax: +49 (0)931-98442

Department responsible for information:
Application Engineering & Product Management (AEPM)
Telephone: +49 (0)931-90098-0
E-mail: technik.wuerzburg@enilive.com

1.4 Emergency telephone number

GIZ-Nord, Göttingen
Telephone: +49 (0)551-19240

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to EC regulation 1272/2008 (CLP)

Aquatic Chronic 3; H412 Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labelling (CLP)

Hazard statements:
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements:
P273 Avoid release to the environment.
P501 Dispose of contents/container to hazardous or special waste collection point.

2.3 Other hazards

Special danger of slipping by leaking/spilling product.
Outflowing product can lead to the formation of a film on the water surface, which reduces oxygen exchange and may result in the death of organisms.

Endocrine disrupting properties, Results of PBT and vPvB assessment:
This product does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% (w/w) or higher.
The product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.1 Substances: not applicable

3.2 Mixtures

Chemical characterisation:

A mixture of mineral oil and additives on the basis of Distillates (petroleum), solvent-refined heavy paraffinic.

Hazardous ingredients:

Identifiers	Designation Classification	Content
REACH 01-2119490822-33-xxxx EC No. 204-884-0 CAS 128-39-2	2,6-di-tert-butylphenol Skin Irrit. 2; H315. Aquatic Acute 1; H400. Aquatic Chronic 1; H410.	< 1 %
REACH 01-2119473797-19-xxxx list no. 627-034-4 CAS 1213789-63-9	(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines Acute Tox. 4; H302. Skin Corr. 1B; H314. STOT SE 3; H335. STOT RE 2; H373. Asp. Tox. 1; H304. Aquatic Acute 1; H400. Aquatic Chronic 1; H410. M-factors: Aquatic Acute 1: M = 10. Aquatic Chronic 1: M = 10.	< 0,1 %
EC No. 202-436-9 CAS 95-63-6	1,2,4-Trimethylbenzene Flam. Liq. 3; H226. Acute Tox. 4; H332. Skin Irrit. 2; H315. Eye Irrit. 2; H319. STOT SE 3; H335. Asp. Tox. 1; H304. Aquatic Chronic 2; H411.	< 0,001 %
EC No. 208-394-8 CAS 526-73-8	1,2,3-Trimethylbenzene Flam. Liq. 3; H226. Skin Irrit. 2; H315. Eye Irrit. 2; H319.	< 0,001 %
REACH 01-2120769496-37-xxxx EC No. 203-604-4 CAS 108-67-8	1,3,5-Trimethylbenzene Flam. Liq. 3; H226. Skin Irrit. 2; H315. Eye Irrit. 2; H319. STOT SE 3; H335. Asp. Tox. 1; H304. Aquatic Chronic 2; H411. Specific concentration limits (SCL): STOT SE 3; H335: C ≥ 25 %	< 0,001 %
EC No. 202-422-2 CAS 95-47-6	o-Xylene Flam. Liq. 3; H226. Acute Tox. 4; H312. Acute Tox. 4; H332. Skin Irrit. 2; H315. Eye Irrit. 2; H319. STOT SE 3; H335. Asp. Tox. 1; H304. Aquatic Chronic 3; H412.	< 0,001 %
EC No. 202-704-5 CAS 98-82-8	Cumene Flam. Liq. 3; H226. Carc. 1B; H350. STOT SE 3; H335. Asp. Tox. 1; H304. Aquatic Chronic 2; H411.	< 0,001 %

Full text of H- and EUH-statements: see section 16.

Additional information: The highly refined mineral oil contains <3% (w/w) DMSO extract, according to IP346.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information: Take off contaminated clothing and wash it before reuse.
In the event of persistent symptoms seek medical treatment.

In case of inhalation: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. In the events of symptoms take medical treatment.

Following skin contact: After contact with skin, wash immediately with soap and plenty of water. Consult a doctor if skin irritation persists.

After eye contact: Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing. In case of eye irritation consult an ophthalmologist.

After swallowing: Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Danger of aspiration! Do not induce vomiting. Immediately get medical attention.

4.2 Most important symptoms and effects, both acute and delayed

After contact with skin:
Frequently or prolonged contact with skin may cause dermal irritation.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media:
Water spray jet, foam, extinguishing powder, carbon dioxide.

Extinguishing media which must not be used for safety reasons:
Full water jet.

5.2 Special hazards arising from the substance or mixture

Combustible.
May form dangerous gases and vapours in case of fire.
Furthermore, there may develop: Pyrolysis products, hydrogen sulfide, nitrogen oxides (NOx), phosphorus oxides, hydrocarbons, carbon monoxide and carbon dioxide.

5.3 Advice for firefighters

Special protective equipment for firefighters:
Wear self-contained positive pressure breathing apparatus and full firefighting protective clothing.

Additional information: Use fine water spray to cool endangered containers. Move undamaged containers from immediate hazard area if it can be done safely.
Contaminated fire-fighting water must be collected separately. Do not allow water used to extinguish fire to enter drains, ground or waterways.
Fire residuals and contaminated extinguishing water must be disposed of in accordance with the regulations of the local authorities.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Do not breathe mist/vapours/spray. Avoid contact with the substance.
If possible, eliminate leakage. Provide adequate ventilation.
Keep unprotected people away.
Wear appropriate protective equipment. Take off contaminated clothing and wash it before reuse.

6.2 Environmental precautions

Do not allow to enter into ground-water, surface water or drains.
If necessary, notify appropriate authorities.

6.3 Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, universal binding agents, sawdust). Collect in appropriate containers for recovery or disposal.
Prevent spread over a wide area (e.g. by containment or oil barriers).
Never return spills in original containers for re-use.

Additional information: Special danger of slipping by leaking/spilling product.

6.4 Reference to other sections

Refer additionally to section 8 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advices on safe handling: Provide adequate ventilation, and local exhaust as needed. Do not breathe mist/vapours/spray. Avoid oil mist formation.
Wear appropriate protective equipment.
Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.
Take off contaminated clothing and wash it before reuse. Do not get in eyes, on skin, or on clothing.

Precautions against fire and explosion:
Keep away from heat. Keep away from sources of ignition - No smoking.
When handling larger quantities, take precautionary measures against electrostatic charging.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storerooms and containers:
Store container tightly closed in a dry area. Keep in a cool place.
Store only in original container.
Protect from heat and direct sunlight.
Recommended storage temperature: < 50 °C.

Hints on joint storage: Do not store together with: Strong oxidizing agents.
Keep away from food, drink and animal feedingstuffs.

Storage class: 10 = Combustible liquids that cannot be assigned to any of the above storage classes

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
95-63-6	1,2,4-Trimethylbenzene	Germany: DFG Kurzzeit	50 mg/m³; 10 ppm
		Germany: DFG Langzeit	25 mg/m³; 5 ppm
		Germany: TRGS 900 Kurzzeit	200 mg/m³; 40 ppm
		Germany: TRGS 900 Langzeit	100 mg/m³; 20 ppm
526-73-8	1,2,3-Trimethylbenzene	Germany: DFG Kurzzeit	50 mg/m³; 10 ppm
		Germany: DFG Langzeit	25 mg/m³; 5 ppm
		Germany: TRGS 900 Kurzzeit	200 mg/m³; 40 ppm
		Germany: TRGS 900 Langzeit	100 mg/m³; 20 ppm
108-67-8	1,3,5-Trimethylbenzene	Germany: DFG Kurzzeit	50 mg/m³; 10 ppm
		Germany: DFG Langzeit	25 mg/m³; 5 ppm
		Germany: TRGS 900 Kurzzeit	200 mg/m³; 40 ppm
		Germany: TRGS 900 Langzeit	100 mg/m³; 20 ppm
95-47-6	o-Xylene	Europe: IOELV: STEL	442 mg/m³; 100 ppm (may be absorbed through the skin)
		Europe: IOELV: TWA	221 mg/m³; 50 ppm (may be absorbed through the skin)
		Germany: TRGS 900 Kurzzeit	440 mg/m³; 100 ppm (may be absorbed through the skin)
		Germany: TRGS 900 Langzeit	220 mg/m³; 50 ppm (may be absorbed through the skin)
98-82-8	Cumene	Europe: IOELV: STEL	250 mg/m³; 50 ppm (may be absorbed through the skin)
		Europe: IOELV: TWA	50 mg/m³; 10 ppm (may be absorbed through the skin)
		Germany: TRGS 900 Kurzzeit	200 mg/m³; 40 ppm (may be absorbed through the skin)
		Germany: TRGS 900 Langzeit	50 mg/m³; 10 ppm (may be absorbed through the skin)

Biological limit values:

CAS No.	Designation	Type	Limit value	Parameter	Sampling
95-63-6	1,2,4-Trimethylbenzene	Germany: TRGS 903, urine	400 mg/g creatinine	dimethylbenzoic acids	at long term exposure: at the end of the shift after several previous shifts
526-73-8	1,2,3-Trimethylbenzene	Germany: TRGS 903, urine	400 mg/g creatinine	dimethylbenzoic acids	at long term exposure: at the end of the shift after several previous shifts
108-67-8	1,3,5-Trimethylbenzene	Germany: TRGS 903, urine	400 mg/g creatinine	dimethylbenzoic acids	at long term exposure: at the end of the shift after several previous shifts
95-47-6	o-Xylene	Germany: BAT, urine Germany: TRGS 903, urine	1.800 g 2.000 mg/L	Methylhippur-(Tolur-)säure (alle Isomere) Methylhippur-(Tolur-)säure (alle Isomere)	end of exposure or end of shift end of exposure or end of shift
98-82-8	Cumene	Germany: TRGS 903, urine	10 mg/g creatinine	2-Phenylpropan-2-ol	end of exposure or end of shift

DNEL/DMEL:

Information about Distillates (petroleum), solvent-refined heavy paraffinic (CAS 64741-88-4):
DNEL, workers, inhalative, systemic, long-term: 2,73 mg/m³
DNEL, workers, inhalative, local, long-term: 5,58 mg/m³
DNEL, workers, dermal, systemic, long-term: 0,97 mg/kg bw/d
DNEL, consumers, oral, systemic, long-term: 0,74 mg/kg bw/d

Information about (Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines (CAS 1213789-63-9):
DNEL, workers, inhalative, systemic, long-term: 0,38 mg/m³
DNEL, workers, inhalative, local, long-term: 1 mg/m³
DNEL, workers, inhalative, local, short-term: 1 mg/m³
DNEL, consumers, inhalative, systemic, long-term: 0,035 mg/m³
DNEL, consumers, oral, systemic, long-term: 40 µg/kg bw/d

PNEC:

Information about Distillates (petroleum), solvent-refined heavy paraffinic (CAS 64741-88-4):
PNEC, Secondary Poisoning: 9,33 mg/kg Food

Information about (Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines (CAS 1213789-63-9):
PNEC, water (freshwater): 0,26 µg/L
PNEC, water (freshwater, intermittent release): 1,6 µg/L
PNEC, water (marine water): 0,026 µg/L
PNEC, sewage treatment plant: 550 µg/L
PNEC, sediment (freshwater): 3,76 mg/kg dw
PNEC, sediment (marine water): 0,376 mg/kg dw
PNEC, soil: 10 mg/kg dw

8.2 Exposure controls

Provide good ventilation and/or an exhaust system in the work area.

Personal protection equipment

Occupational exposure controls

Respiratory protection: In case of inadequate ventilation wear respiratory protection. Respiratory protection must be worn whenever the WEL levels have been exceeded.
Generation/formation of mist: Use filter apparatus type A2/P2.
The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product.

Hand protection: Protective gloves according to DIN EN ISO 374-1.

During full contact:
Camatril
Glove material: Nitrile rubber (NBR)
Breakthrough time: 480 min
Layer thickness: 0,33 mm

During splash contact:
Dermatril
Glove material: Nitrile rubber (NBR)
Breakthrough time: 30 min
Layer thickness: 0,11 mm

Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Eye protection: Tightly sealed goggles according to DIN EN ISO 16321-1.

Body protection: Wear suitable protective clothing.

General protection and hygiene measures:
Do not breathe mist/vapours/spray.
Take off contaminated clothing and wash it before reuse. Do not get in eyes, on skin, or on clothing.
Do not eat, drink or smoke when using this product.
Wash hands thoroughly after handling.
Protect skin by using skin protective cream.

Environmental exposure controls

Refer to "6.2 Environmental precautions".

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state at 20 °C and 101.3 kPa	liquid
Colour:	light yellow - light brown
Odour:	Characteristic
Melting point/freezing point:	No data available
Boiling point or initial boiling point and boiling range:	> 320 °C
Flammability:	No data available
Lower and upper explosion limit:	LEL (Lower Explosion Limit): 0,60 Vol-% UEL (Upper Explosive Limit): 6,50 Vol-%
Flash point:	> 230 °C (DIN ISO 2592)
Auto-ignition temperature:	No data available
Decomposition temperature:	Not applicable
pH:	Not applicable
Kinematic viscosity:	at 40 °C: 43,9 mm²/s (ASTM D7279)
Water solubility:	Practically insoluble

Partition coefficient n-octanol/water (log value):
3,42 log P(o/w) (1,3,5-Trimethylbenzene (CAS 108-67-8))
Based on the n-octanol/water partition coefficient significant accumulation in organisms is not expected.
3,66 log P(o/w) (Cumene (CAS 98-82-8))
Based on the n-octanol/water partition coefficient significant accumulation in organisms is not expected.

Vapour pressure: No data available
Density: at 15 °C: 0,865 g/mL (DIN EN ISO 12185)
Relative vapour density: No data available
Particle characteristics: Not applicable

9.2 Other information

Explosive properties: No data available
Oxidizing characteristics: No data available

Auto-ignition temperature: No data available
Additional information: Pour point: < -24 °C (ASTM D7346)

SECTION 10: Stability and reactivity

10.1 Reactivity

Refer to subsection "Possibility of hazardous reactions".

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

The formation of combustible vapours is possible at temperatures above: Flash point.

10.4 Conditions to avoid

Protect from heat and direct sunlight.

10.5 Incompatible materials

Strong oxidizing agents.

10.6 Hazardous decomposition products

No hazardous decomposition products when regulations for storage and handling are observed.
Thermal decomposition: Not applicable

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Toxicological effects: The statements are derived from the properties of the single components. No toxicological data is available for the product as such.

Acute toxicity (oral): Based on available data, the classification criteria are not met.
ATEmix (calculated): > 2.000 mg/kg

Acute toxicity (dermal): Based on available data, the classification criteria are not met.
ATEmix (calculated): > 2.000 mg/kg

Acute toxicity (inhalative): Based on available data, the classification criteria are not met.
ATEmix (calculated, vapour): > 20 mg/L
ATEmix (calculated, dusts/mist): > 5 mg/L

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Serious eye damage/irritation: Based on available data, the classification criteria are not met.

Sensitisation to the respiratory tract: Based on available data, the classification criteria are not met.

Skin sensitisation: Based on available data, the classification criteria are not met.

Germ cell mutagenicity/Genotoxicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Based on available data, the classification criteria are not met.

Reproductive toxicity: Based on available data, the classification criteria are not met.

Effects on or via lactation: Lack of data.

Specific target organ toxicity (single exposure): Based on available data, the classification criteria are not met.

Specific target organ toxicity (repeated exposure): Based on available data, the classification criteria are not met.

Aspiration hazard: Based on available data, the classification criteria are not met.

11.2 Information on other hazards

Endocrine disrupting properties:
None

Other information: Information about (Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines (CAS 1213789-63-9):
LD50 Rat, oral: 1.200 mg/kg (OECD 401)

Information about 1,2,4-Trimethylbenzene (CAS 95-63-6):
ATE, inhalative (vapour): 11 mg/L

Information about 1,3,5-Trimethylbenzene (CAS 108-67-8):
LC50 Rat, inhalative (vapour): 24 mg/L/4h

Information about o-Xylene (CAS 95-47-6):
ATE, dermal: 1.100 mg/kg
ATE, inhalative (vapour): 11 mg/L

Information about Cumene (CAS 98-82-8):
LD50 Rabbit, dermal: > 3.160 mg/kg
LC0 Rat, inhalative (vapour): 17,6 mg/L/6h

Symptoms

After contact with skin:
Frequently or prolonged contact with skin may cause dermal irritation.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity: Harmful to aquatic life with long lasting effects.

Information about 2,6-di-tert-butylphenol (CAS 128-39-2):
Fish toxicity:
LC50 Pimephales promelas (fathead minnow): 1,4 mg/L/96h (OECD 204)
Daphnia toxicity:
EC50 Daphnia magna (Big water flea): 0,45 mg/L/48h
Algae toxicity:
EC50 Pseudokirchneriella subcapitata (green algae): 1,4 mg/L/72h

Information about (Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines (CAS 1213789-63-9):
Fish toxicity:
LC50 Danio rerio (zebrafish): 0,84 mg/L/96h (OECD 203)
Daphnia toxicity:
EC50 Daphnia magna (Big water flea): 0,32 mg/L/48h (OECD 202)
Algae toxicity:
EC50 Desmodesmus subspicatus (green algae): 0,39 mg/L/72h (OECD 201)

Information about 1,3,5-Trimethylbenzene (CAS 108-67-8):
Fish toxicity:
LC50 Carassius auratus (goldfish): 12,52 mg/L/96h
Daphnia toxicity:
LC50 Daphnia magna (Big water flea): 6 mg/L/48h (OECD 202)
Algae toxicity:
EC50 Desmodesmus subspicatus (green algae): 25 mg/L/48h

Information about Cumene (CAS 98-82-8):
Fish toxicity:
LC50 Oncorhynchus mykiss: 4,8 mg/L/96h
Daphnia toxicity:
EC50 Daphnia magna (Big water flea): 2,14 mg/L/48h (OECD 202)
Algae toxicity:
EC50 Desmodesmus subspicatus (green algae): 2,01 mg/L/72h (OECD 201)

Water Hazard Class: 1 = slightly hazardous to water (Self-classification (mixture).)

12.2 Persistence and degradability

Further details: Not readily biodegradable (according to OECD criteria). Data apply to the main component.

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water:
3,42 log P(o/w) (1,3,5-Trimethylbenzene (CAS 108-67-8))
Based on the n-octanol/water partition coefficient significant accumulation in organisms is not expected.
3,66 log P(o/w) (Cumene (CAS 98-82-8))
Based on the n-octanol/water partition coefficient significant accumulation in organisms is not expected.

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

The product does not contain any substances classified as PBT or vPvB.

12.6 Endocrine disrupting properties

None

12.7 Other adverse effects

General information: Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil..

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Waste key number: 13 01 10* = Mineral based non-chlorinated hydraulic oils
* = Evidence for disposal must be provided.

Recommendation: Waste disposal according to official state regulations.

Package

Waste key number: 15 01 10* = Packaging containing residues of or contaminated by dangerous substances
* = Evidence for disposal must be provided.

Recommendation: Dispose of waste according to applicable legislation. Handle contaminated packages in the same way as the substance itself.

Section 14. Transport information

14.1 UN number or ID number

ADR/RID, IMDG, IATA-DGR:
not applicable

ADN: ID 9006

14.2 UN proper shipping name

ADR/RID, IMDG, IATA-DGR:
Not restricted

ADN: ID 9006, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

14.3 Transport hazard class(es)

ADR/RID, IMDG, IATA-DGR:
not applicable

ADN: Class 9, Code: M12

14.4 Packing group

ADR/RID, ADN, IMDG, IATA-DGR:
not applicable

14.5 Environmental hazards

Dangerous for the environment:
Substance/mixture is not environmentally hazardous according to the criteria of the UN model regulations.

Marine pollutant - IMDG: no

14.6 Special precautions for user

Inland waterway craft (ADN)

Hazard label: -
Transport permitted: T
Equipment necessary: PP

14.7 Maritime transport in bulk according to IMO instruments

No data available

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations - Germany

Storage class: 10 = Combustible liquids that cannot be assigned to any of the above storage classes
Water Hazard Class: 1 = slightly hazardous to water (Self-classification (mixture).)
Technical guidance air: 5.2.5
Further regulations, limitations and legal requirements:
No data available

National regulations - EC member states

Further regulations, limitations and legal requirements:
Use restriction according to REACH annex XVII, no.: 3, 75

15.2 Chemical Safety Assessment

For this mixture a chemical safety assessment is not required.

SECTION 16: Other information

Classification procedure: Environmental hazards: Calculation method
Wording of the H-phrases under paragraph 2 and 3:
H226 = Flammable liquid and vapour.
H302 = Harmful if swallowed.
H304 = May be fatal if swallowed and enters airways.
H312 = Harmful in contact with skin.
H314 = Causes severe skin burns and eye damage.
H315 = Causes skin irritation.
H319 = Causes serious eye irritation.
H332 = Harmful if inhaled.
H335 = May cause respiratory irritation.
H350 = May cause cancer.
H373 = May cause damage to organs through prolonged or repeated exposure.
H400 = Very toxic to aquatic life.
H410 = Very toxic to aquatic life with long lasting effects.
H411 = Toxic to aquatic life with long lasting effects.
H412 = Harmful to aquatic life with long lasting effects.

Reason of change: Changes in section 8: Occupational exposure limit values
Date of first version: 24.5.2022

Department issuing data sheet:

see section 1: Department responsible for information

Abbreviations and acronyms:

Acute Tox.: Acute toxicity
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
Aquatic Acute: Hazardous to the aquatic environment - acute
Aquatic Chronic: Hazardous to the aquatic environment - chronic
AS/NZS: Australian Standards/New Zealand Standards
Asp. Tox.: Aspiration toxicity
ATE: Acute toxicity estimate
ATEmix: Acute Toxicity Estimate of mixture
Carc.: Carcinogenicity
CAS: Chemical Abstracts Service
CFR: Code of Federal Regulations
CLP: Classification, Labelling and Packaging
DMEL: Derived minimal effect level
DNEL: Derived no-effect level
EC: European Community
EC50: Effective Concentration 50%
EmS: Emergency Response Procedures for Ships Carrying Dangerous Goods
EN: European Standard
EQ: Excepted quantities
EU: European Union
Eye Irrit.: Eye irritation
Flam. Liq.: Flammable liquid
IATA: International Air Transport Association
IATA-DGR: International Air Transport Association – Dangerous Goods Regulations
IBC Code: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
IMDG Code: International Maritime Dangerous Goods Code
IMO: International Maritime Organization
LC0: Lethal concentration 0%
LC50: Median lethal concentration
LD50: Lethal dose 50%
LEL: Lower Explosion Limit
log P(o/w): Partition coefficient: octanol/water
MARPOL: Maritime Pollution: The International Convention for the Prevention of Pollution from Ships
M-factor: Multiplication factor
OECD: Organisation for Economic Co-operation and Development
OEL: Occupational Exposure Limit Value
OSHA: Occupational Safety and Health Administration
PBT: Persistent, bioaccumulative and toxic
PNEC: Predicted no-effect concentration
REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals
RID: Regulations Concerning the International Carriage of Dangerous Goods by Rail
Skin Corr.: Skin corrosion
Skin Irrit.: Skin irritation
STOT RE: Specific target organ toxicity - repeated exposure
STOT SE: Specific target organ toxicity - single exposure
TLV: Threshold Limit Value
TRGS: Technical Rules for Hazardous Substances
vPvB: Very persistent and very bioaccumulative
WEL: Workplace Exposure Limit

The information in this data sheet has been established to our best knowledge and was up-to-date at time of revision. It does not represent a guarantee for the properties of the product described in terms of the legal warranty regulations.

Most recent product information is available at:
https://sumdat.net/y8e63yw3