Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

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

* **1.1. Product identifier**

Trade name/designation:

RAVENOL LTC Premix -40°C Protect C12++

Article No.:
1410126

UFI:
5SVD-13FQ-V153-EMUP

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

Use of the substance/mixture:
Antifreeze agent

* **1.3. Details of the supplier of the safety data sheet**

Supplier (manufacturer/importer/only representative/downstream user/distributor):

Ravensberger Schmierstoffvertrieb GmbH
Produktsicherheit
Jöllenbecker Str. 2
33824 Werther
Germany
Telephone: +49 5203 9719 0
Telefax: +49 5203 9719 40
E-mail: kontakt@ravenol.de
Website: www.ravenol.de

E-mail (competent person): sdb@ravenol.de

* **1.4. Emergency telephone number**

24 hr. emergency phone number, 24h: +49 700 24 112 112 (Contract ID: RAV) / +1 872 5888271 (Contract ID: RAV)

SECTION 2: Hazards identification

* **2.1. Classification of the substance or mixture**

Classification according to Regulation (EC) No 1272/2008 [CLP]

Hazard classes and hazard categories	Hazard statements	Classification procedure
Acute toxicity (oral) *(Acute Tox. 4)*	H302: Harmful if swallowed.	Calculation method.
STOT-repeated exposure *(STOT RE 2)*	H373: May cause damage to organs through prolonged or repeated exposure.	Calculation method.

* **2.2. Label elements**

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms:

GHS07
Exclamation mark

GHS08
Health hazard

Signal word: Warning

Hazard components for labelling:
1,2-Ethanediol

Hazard statements for health hazards	
H302	Harmful if swallowed.
H373	May cause damage to kidneys through prolonged or repeated exposure if swallowed.

Supplemental hazard information: none

Precautionary statements	
P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.

Precautionary statements Prevention	
P260	Do not breathe vapours and spray.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.

Precautionary statements Response	
P301 + P312	IF SWALLOWED: Call a POISON CENTER/doctor/Emergency telephone number/ if you feel unwell.
P330	Rinse mouth.

Precautionary statements Disposal	
P501	Dispose of contents/container to an appropriate recycling or disposal facility.

*
2.3. Other hazards

Other adverse effects:
The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

SECTION 3: Composition/information on ingredients

*
3.2. Mixtures

Hazardous ingredients / Hazardous impurities / Stabilisers:

Product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CLP]	Concentration
CAS No.: 107-21-1 EC No.: 203-473-3 REACH No.: 01-2119456816-28-0173	**1,2-Ethanediol** Acute Tox. 4 (H302), STOT RE 2 (H373)  Warning	30 – < 50 weight-%
CAS No.: 17265-14-4 EC No.: 241-300-3	**disodium sebacate** Eye Irrit. 2 (H319)  Warning	3 – < 6 weight-%
CAS No.: 64665-57-2 EC No.: 265-004-9 REACH No.: 01-2119980062-42-XXXX	**Natrium-4(od.5)-methyl-1H-benzotriazolid** Acute Tox. 4 (H302), Aquatic Chronic 2 (H411), Eye Dam. 1 (H318), Repr. 2 (H361d), Skin Corr. 1B (H314)  Danger	0 – < 0.7 weight-%

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

SECTION 4: First aid measures

*
4.1. Description of first aid measures

General information:
In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Remove victim out of the danger area. Remove contaminated, saturated clothing. If unconscious but breathing normally, place in recovery position and seek medical advice. Do not leave affected person unattended.

Following inhalation:
In case of respiratory tract irritation, consult a physician. Provide fresh air.

In case of skin contact:
In case of skin irritation, consult a physician. After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse.

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

Following ingestion:
If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label. If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention. If unconscious but breathing normally, place in recovery position and seek medical advice. Harmful if swallowed. May cause damage to organs.(kidneys)

Self-protection of the first aider:
Use personal protection equipment. No direct artificial respiration to be given by first aider.

* ### 4.2. Most important symptoms and effects, both acute and delayed
Harmful if swallowed.
May cause damage to organs through prolonged or repeated exposure.

4.3. Indication of any immediate medical attention and special treatment needed
Observe risk of aspiration if vomiting occurs. Treat symptomatically.

SECTION 5: Firefighting measures

* ### 5.1. Extinguishing media
Suitable extinguishing media:
Co-ordinate fire-fighting measures to the fire surroundings.
Carbon dioxide (CO2)
Extinguishing powder
alcohol resistant foam
Use water spray jet to protect personnel and to cool endangered containers.

Unsuitable extinguishing media:
Full water jet

5.2. Special hazards arising from the substance or mixture
In case of fire may be liberated: Gases/vapours, toxic. The product itself does not burn.

Hazardous combustion products:
Nitrogen oxides (NOx) Carbon monoxide Carbon dioxide (CO2)

5.3. Advice for firefighters
In case of fire: Wear self-contained breathing apparatus.

5.4. Additional information
Co-ordinate fire-fighting measures to the fire surroundings. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

* ### 6.1. Personal precautions, protective equipment and emergency procedures
6.1.1. For non-emergency personnel
Personal precautions:
Use personal protection equipment. Special danger of slipping by leaking/spilling product. Do not breathe vapour.

Protective equipment:
Personal protection equipment: see section 8

Emergency procedures:
Eliminate all ignition sources if safe to do so. Remove persons to safety. Provide adequate ventilation.

6.1.2. For emergency responders
Personal protection equipment:
Use personal protection equipment. Use appropriate respiratory protection.

* ### 6.2. Environmental precautions
Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains. Prevent spread over a wide area (e.g. by containment or oil barriers). In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

6.3. Methods and material for containment and cleaning up
For containment:
Prevent spread over a wide area (e.g. by containment or oil barriers).

For cleaning up:
Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

Other information:
Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections
SECTION 7: Handling and storage
SECTION 8: Exposure controls/personal protection
SECTION 13: Disposal considerations

6.5. Additional information
Clear spills immediately.

SECTION 7: Handling and storage

* ### 7.1. Precautions for safe handling

Protective measures

Advices on safe handling:
Wear personal protection equipment (refer to section 8).
When using do not eat, drink, smoke, sniff. Wash hands before breaks and after work. Do not put any product-impregnated cleaning rags into your trouser pockets. Clear spills immediately. Use appropriate container to avoid environmental contamination.

Fire prevent measures:
No special fire protection measures are necessary.

Measures to prevent aerosol and dust generation:
Provide adequate ventilation.

Environmental precautions:
Shafts and sewers must be protected from entry of the product.

Advices on general occupational hygiene
Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500.

* ### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions:
Keep locked up and out of reach of children.
Keep container tightly closed in a cool, well-ventilated place.

Requirements for storage rooms and vessels:
Keep/Store only in original container.
Shafts and sewers must be protected from entry of the product.

Hints on storage assembly:
Do not store together with: Food and feedingstuffs

Storage class (TRGS 510, Germany): 12 – non-combustible liquids that cannot be assigned to any of the above storage classes

Further information on storage conditions:
Store in a cool dry place. Keep away from heat.

7.3. Specific end use(s)

Recommendation:
Observe technical data sheet.
Antifreeze / Coolant

SECTION 8: Exposure controls/personal protection

* 8.1. Control parameters

8.1.1. Occupational exposure limit values

Limit value type (country of origin)	Substance name	① Long-term occupational exposure limit value ② Short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark
CH from 1 Jan 2022	**1,2-Ethanediol** CAS No.: 107-21-1 EC No.: 203-473-3	① 10 ppm (26 mg/m³) ② 20 ppm (52 mg/m³) ⑤ (Dampf und Aerosol; kann über die Haut aufgenommen werden) H SSC; Tox: OAW Auge
BE	**1,2-Ethanediol** CAS No.: 107-21-1 EC No.: 203-473-3	① 20 ppm (52 mg/m³) ③ 40 ppm (104 mg/m³) ⑤ (Aérosol, peut être absorbé par la peau) D, M
CZ from 1 Mar 2020	**1,2-Ethanediol** CAS No.: 107-21-1 EC No.: 203-473-3	① 19.4 ppm (50 mg/m³) ② 38.8 ppm (100 mg/m³) ⑤ (může pronikat pokožkou) D
PL	**1,2-Ethanediol** CAS No.: 107-21-1 EC No.: 203-473-3	① 15 mg/m³ ② 50 mg/m³ ⑤ (może przenikać przez skórę do organizmu) skóra
NO from 1 Jul 2021	**1,2-Ethanediol** CAS No.: 107-21-1 EC No.: 203-473-3	① 20 ppm (52 mg/m³) ② 40 ppm (104 mg/m³) ⑤ (damp og Aerosol, kan absorberes gjennom huden) HE5S
TRGS 900 (DE)	**1,2-Ethanediol** CAS No.: 107-21-1 EC No.: 203-473-3	① 10 ppm (26 mg/m³) ② 20 ppm (52 mg/m³) ⑤ (Aerosol und Dampf, kann über die Haut aufgenommen werden) DFG, EU, H, Y, 11
IE from 17 Jan 2020	**1,2-Ethanediol** CAS No.: 107-21-1 EC No.: 203-473-3	① 20 ppm (52 mg/m³) ② 40 ppm (104 mg/m³) ⑤ (may be absorbed through the skin) Sk, IOELV
MY from 1 Jan 2000	**1,2-Ethanediol** CAS No.: 107-21-1 EC No.: 203-473-3	③ 39.4 ppm (100 mg/m³)
HTP (FI)	**1,2-Ethanediol** CAS No.: 107-21-1 EC No.: 203-473-3	① 20 ppm (50 mg/m³) ② 40 ppm (100 mg/m³) ⑤ (voivat imeytyä ihon läpi) iho
LT from 15 Oct 2007	**1,2-Ethanediol** CAS No.: 107-21-1 EC No.: 203-473-3	① 10 ppm (25 mg/m³) ② 20 ppm (50 mg/m³) ⑤ (garų ir Aerozolis) (tikėtinas įsisavinimas per odą) Šis RD taikomas bendrai garu ir aerozolio koncentracijai. O
SE from 1 Jun 2016	**1,2-Ethanediol** CAS No.: 107-21-1 EC No.: 203-473-3	① 10 ppm (25 mg/m³) ② 40 ppm (104 mg/m³) ⑤ (kan absorberas genom huden)
NPEL (SK) from 23 Nov 2011	**1,2-Ethanediol** CAS No.: 107-21-1 EC No.: 203-473-3	① 20 ppm (52 mg/m³) ② 40 ppm (104 mg/m³) ⑤ (rátajte so vstrebávaním cez pokožku) K
MAK (AT)	**1,2-Ethanediol** CAS No.: 107-21-1 EC No.: 203-473-3	① 10 ppm (26 mg/m³) ⑤ (kann über die Haut aufgenommen werden) H

Limit value type (country of origin)	Substance name	① Long-term occupational exposure limit value ② Short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark
DK	**1,2-Ethanediol** CAS No.: 107-21-1 EC No.: 203-473-3	① 10 mg/m³ ② 20 mg/m³ ⑤ (forstøvet)
DK from 28 Jun 2022	**1,2-Ethanediol** CAS No.: 107-21-1 EC No.: 203-473-3	① 10 ppm (26 mg/m³) ② 40 ppm (104 mg/m³) ⑤ (kan optages gennem huden) EH
MAK (AT)	**1,2-Ethanediol** CAS No.: 107-21-1 EC No.: 203-473-3	② 20 ppm (52 mg/m³) ⑤ (max. 8x5 min./Schicht, Momentanwert, kann über die Haut aufgenommen werden) H
BG from 6 Jan 2012	**1,2-Ethanediol** CAS No.: 107-21-1 EC No.: 203-473-3	① 20 ppm (52 mg/m³) ② 40 ppm (104 mg/m³) ⑤ (трябва да се очаква абсорбиране през кожата)
HR	**1,2-Ethanediol** CAS No.: 107-21-1 EC No.: 203-473-3	① 20 ppm (52 mg/m³) ② 40 ppm (104 mg/m³) ⑤ (mora se uzeti u obzir prodiranje kroz kožu) koža
ES	**1,2-Ethanediol** CAS No.: 107-21-1 EC No.: 203-473-3	① 20 ppm (52 mg/m³) ② 40 ppm (104 mg/m³) ⑤ (puede ser absorbido a través dérmica) vía dérmica, VLI
RO from 21 Aug 2018	**1,2-Ethanediol** CAS No.: 107-21-1 EC No.: 203-473-3	① 20 ppm (52 mg/m³) ② 40 ppm (104 mg/m³) ⑤ (e de asteptat asimilarea prin piele) P
EE from 17 Jan 2020	**1,2-Ethanediol** CAS No.: 107-21-1 EC No.: 203-473-3	① 20 ppm (52 mg/m³) ② 40 ppm (104 mg/m³) ⑤ (naha kaudu kergesti absorbeeruvad ained, aur ja Aerosool) A, 18
LV	**1,2-Ethanediol** CAS No.: 107-21-1 EC No.: 203-473-3	① 20 ppm (52 mg/m³) ② 40 ppm (104 mg/m³) ⑤ (var absorbet caur adu) Āda
Alberta (CA)	**1,2-Ethanediol** CAS No.: 107-21-1 EC No.: 203-473-3	③ 100 mg/m³ ⑤ 3
BC (CA) from 1 Mar 2022	**1,2-Ethanediol** CAS No.: 107-21-1 EC No.: 203-473-3	① 10 mg/m³ ② 20 mg/m³ ③ 100 mg/m³ ⑤ (Aerosol)
BC (CA) from 1 Mar 2022	**1,2-Ethanediol** CAS No.: 107-21-1 EC No.: 203-473-3	③ 50 ppm ⑤ (vapor)
IOELV (EU)	**1,2-Ethanediol** CAS No.: 107-21-1 EC No.: 203-473-3	① 20 ppm (52 mg/m³) ② 40 ppm (104 mg/m³) ⑤ (may be absorbed through the skin)
VRI (FR)	**1,2-Ethanediol** CAS No.: 107-21-1 EC No.: 203-473-3	① 20 ppm (52 mg/m³) ② 40 ppm (104 mg/m³) ⑤ (peut être absorbé par la peau)
WEL (GB)	**1,2-Ethanediol** CAS No.: 107-21-1 EC No.: 203-473-3	① 20 ppm (52 mg/m³) ② 40 ppm (104 mg/m³) ⑤ (vapour, may be absorbed through the skin)

Limit value type (country of origin)	Substance name	① Long-term occupational exposure limit value ② Short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark
SI	**1,2-Ethanediol** CAS No.: 107-21-1 EC No.: 203-473-3	① 20 ppm (52 mg/m³) ② 40 ppm (104 mg/m³) ⑤ (računati je treba z možnostjo prodiranja skozi kožo) K, Y, EU1
TW	**1,2-Ethanediol** CAS No.: 107-21-1 EC No.: 203-473-3	① 10 mg/m³ ⑤ (##)
TW	**1,2-Ethanediol** CAS No.: 107-21-1 EC No.: 203-473-3	③ 50 ppm (127 mg/m³) ⑤ (#)
WEL (GB)	**1,2-Ethanediol** CAS No.: 107-21-1 EC No.: 203-473-3	① 10 mg/m³ ⑤ (may be absorbed through the skin)
KR	**1,2-Ethanediol** CAS No.: 107-21-1 EC No.: 203-473-3	③ 40 ppm (100 mg/m³) ⑤ (## #(#) ##)
IS	**1,2-Ethanediol** CAS No.: 107-21-1 EC No.: 203-473-3	① 10 ppm (26 mg/m³) ② 40 ppm (104 mg/m³) ⑤ (efnið getur auðveldlega borist inn í líkamann gegnum húð) H
IS	**1,2-Ethanediol** CAS No.: 107-21-1 EC No.: 203-473-3	① 10 ppm (26 mg/m³) ⑤ (úðaefni, efnið getur auðveldlega borist inn í líkamann gegnum húð)
CN from 1 Jan 2007	**1,2-Ethanediol** CAS No.: 107-21-1 EC No.: 203-473-3	① 20 mg/m³ ② 40 mg/m³
HU	**1,2-Ethanediol** CAS No.: 107-21-1 EC No.: 203-473-3	① 52 mg/m³ ② 104 mg/m³ ⑤ (felvehető a bőrön keresztül) b, i, N
RU	**1,2-Ethanediol** CAS No.: 107-21-1 EC No.: 203-473-3	① 5 mg/m³ ③ 10 mg/m³
GR from 1 Oct 2016	**1,2-Ethanediol** CAS No.: 107-21-1 EC No.: 203-473-3	① 50 ppm (125 mg/m³) ② 50 ppm (125 mg/m³)
NL from 1 Jan 2023	**1,2-Ethanediol** CAS No.: 107-21-1 EC No.: 203-473-3	① 20 ppm (52 mg/m³) ② 40 ppm (104 mg/m³) ⑤ (damp, kan door de huid in het lichaam worden opgenomen) H
ACGIH (US) from 1 Jan 2017	**1,2-Ethanediol** CAS No.: 107-21-1 EC No.: 203-473-3	② 10 mg/m³ ⑤ (inhalable fraction Aerosol)
NL	**1,2-Ethanediol** CAS No.: 107-21-1 EC No.: 203-473-3	① 10 mg/m³ ⑤ (deeltjes)
TR	**1,2-Ethanediol** CAS No.: 107-21-1 EC No.: 203-473-3	① 20 ppm (52 mg/m³) ② 40 ppm (104 mg/m³) ⑤ (cilt yoluyla alınabilir) Deri
ACGIH (US) from 1 Jan 2017	**1,2-Ethanediol** CAS No.: 107-21-1 EC No.: 203-473-3	① 25 ppm ② 50 ppm ⑤ (vapor)
Québec (CA)	**1,2-Ethanediol** CAS No.: 107-21-1 EC No.: 203-473-3	③ 50 ppm (127 mg/m³)

8.1.2. Biological limit values
No data available

8.1.3. DNEL-/PNEC-values

Substance name	DNEL value	① DNEL type ② Exposure route
1,2-Ethanediol CAS No.: 107-21-1 EC No.: 203-473-3	35 mg/m³	① DNEL worker ② Long-term – inhalation, local effects
1,2-Ethanediol CAS No.: 107-21-1 EC No.: 203-473-3	106 mg/kg bw/day	① DNEL worker ② Long-term - dermal, systemic effects

Substance name	PNEC Value	① PNEC type
1,2-Ethanediol CAS No.: 107-21-1 EC No.: 203-473-3	10 mg/L	① PNEC aquatic, freshwater
1,2-Ethanediol CAS No.: 107-21-1 EC No.: 203-473-3	1 mg/L	① PNEC aquatic, marine water
1,2-Ethanediol CAS No.: 107-21-1 EC No.: 203-473-3	37 mg/kg	① PNEC sediment, freshwater
1,2-Ethanediol CAS No.: 107-21-1 EC No.: 203-473-3	3.7 mg/kg	① PNEC sediment, marine water
1,2-Ethanediol CAS No.: 107-21-1 EC No.: 203-473-3	1.53 mg/kg	① PNEC soil
1,2-Ethanediol CAS No.: 107-21-1 EC No.: 203-473-3	10 mg/L	① PNEC aquatic, intermittent release

*
8.2. Exposure controls

8.2.1. Appropriate engineering controls
See section 7. No additional measures necessary.

8.2.2. Personal protection equipment

Eye/face protection:
During transfer: Eye glasses with side protection
DIN-/EN-Norms EN 166

Skin protection:
Hand protection
Suitable material: NBR (Nitrile rubber), PVC (polyvinyl chloride), CR (polychloroprene, chloroprene rubber)
Thickness of the glove material: ≥ 0,3 mm
Breakthrough time: 480 min
Breakthrough times and swelling properties of the material must be taken into consideration.
The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.
For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.
Tested protective gloves must be worn: EN ISO 374
Suitable protective clothing: Protective clothing

Respiratory protection:
Usually no personal respirative protection necessary.

Thermal hazards:
No data available.

8.2.3. Environmental exposure controls
See section 7. No additional measures necessary.

SECTION 9: Physical and chemical properties

* 9.1. Information on basic physical and chemical properties

Appearance

Physical state: Liquid **Colour:** violet

Odour: characteristic

Safety relevant basis data

Parameter	Value	at °C	① Method ② Remark
pH	8.2	20 °C	
Melting point	*No data available*		
Freezing point	-40 °C		
Initial boiling point and boiling range	*No data available*		
Flash point	*No data available*		
Evaporation rate	*No data available*		
Auto-ignition temperature	*No data available*		
Upper/lower flammability or explosive limits	*No data available*		
Vapour pressure	*No data available*		
Vapour density	*No data available*		
Density	1,082 kg/m³	15 °C	
Bulk density	*not applicable*		
Water solubility	completely miscible		
Partition coefficient: n-octanol/water	*not applicable*		
Dynamic viscosity	*No data available*		
Kinematic viscosity	*No data available*		

* 9.2. Other information

Not applicable

SECTION 10: Stability and reactivity

* 10.1. Reactivity

No known hazardous reactions. hygroscopic.

* 10.2. Chemical stability

The mixture is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

responds with: Oxidising agent, strong, Strong acid

10.4. Conditions to avoid

To avoid thermal decomposition do not overheat.

* 10.5. Incompatible materials

Materials to avoid: Acid, Oxidizing agent, Reducing agent

* 10.6. Hazardous decomposition products

Hazardous combustion products: Carbon monoxide, Carbon dioxide (CO2), Nitrogen oxides (NOx), During heating or in case of fire, toxic gases is possible.

Further information

No information available.

SECTION 11: Toxicological information

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

1,2-Ethanediol CAS No.: 107-21-1 EC No.: 203-473-3	
ATE (oral): ≥536 mg/kg	
LD_{50} oral: ≥7,712 mg/kg (Rat)	
LD_{50} dermal: ≥3,500 mg/kg (Mouse)	
LC_{50} Acute inhalation toxicity (vapour): >2.5 mg/L 6 h (Rat)	
LC_{50} Acute inhalation toxicity (dust/mist): ≥2.5 mg/L 6 h (Rat)	
disodium sebacate CAS No.: 17265-14-4 EC No.: 241-300-3	
LD_{50} oral: >5,000 mg/kg (rat) OECD Guideline 401 (Acute Oral Toxicity)	
LD_{50} dermal: >2,000 mg/kg (rat) OECD Guideline 402 (Acute Dermal Toxicity)	
Natrium-4(od.5)-methyl-1H-benzotriazolid CAS No.: 64665-57-2 EC No.: 265-004-9	
LD_{50} oral: 735 mg/kg (rat) OECD Guideline 401 (Acute Oral Toxicity)	
LD_{50} dermal: >2,000 mg/kg (rabbit) OECD Guideline 402 (Acute Dermal Toxicity)	

Acute oral toxicity:
Harmful if swallowed.

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

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

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.

Respiratory or skin sensitisation:
Based on available data, the classification criteria are not met.

Germ cell mutagenicity:
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.

STOT-single exposure:
Based on available data, the classification criteria are not met.

STOT-repeated exposure:
May cause damage to kidneys through prolonged or repeated exposure if swallowed.

Aspiration hazard:
Observe risk of aspiration if vomiting occurs.

Additional information:
There are no data available on the preparation/mixture itself.

* 11.2. Information on other hazards

Endocrine disrupting properties:
This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

Other information:
No information available.

SECTION 12: Ecological information

* 12.1. Toxicity

1,2-Ethanediol CAS No.: 107-21-1 EC No.: 203-473-3
LC_{50}: ≥72,860 mg/L 4 d (fish)
LC_{50}: 72,860 mg/L 4 d (Pimephales promelas)
EC_{50}: ≥100 mg/L 2 d (crustaceans)
EC_{50}: ≥3,536 – ≤13,000 mg/L 4 d (Algae/water plant)
EC_{50}: >1,995 mg/L
NOEC: ≥15,380 – ≤32,000 mg/L 12 d (fish)
NOEC: ≥7,500 – ≤15,000 mg/L 21 d (crustaceans)
NOEC: ≥100 mg/L 3 d (Algae/water plant)
disodium sebacate CAS No.: 17265-14-4 EC No.: 241-300-3
LC_{50}: >18 mg/L 4 d (fish, Scophthalmus maximus) Paris Commission Guideline (PRACOM 2006): Protocols on Methods for the Testing of Chemicals Used in the Offshore Oil Industry. Part B: Protocol for a Fish Acute Toxicity Test.
LC_{50}: 18 mg/L 2 d (crustaceans, Acartia tonsa) ISO 14669-1999: Water quality - Determination of acute lethal toxicity to marine copepods (Copepoda, Crustacea)
LC_{50}: >100 mg/L 4 d (fish, Danio rerio) OECD 203
EC_{50}: >100 mg/L 2 d (crustaceans, Daphnia magna) OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
EC_{50}: >100 mg/L 2 d (crustaceans, Daphnia magna) OECD 202
NOEC: 10 mg/L 2 d (crustaceans, Acartia tonsa) ISO 14669-1999: Water quality - Determination of acute lethal toxicity to marine copepods (Copepoda, Crustacea)
NOEC: 3 mg/L 3 d (Algae/water plant, Skeletonema costatum) ISO 10253 (Water quality - Marine Algal Growth Inhibition Test with Skeletonema costatum and Phaeodactylum tricornutum)
NOEC: 3 mg/L 3 d (Algae/water plant, Skeletonema costatum)
Natrium-4(od.5)-methyl-1H-benzotriazolid CAS No.: 64665-57-2 EC No.: 265-004-9
LC_{50}: 180 mg/L 4 d (fish, Danio rerio) OECD Guideline 203
EC_{50}: 8.58 mg/L 2 d (crustaceans, Daphnia magna) OECD Guideline 202
EC_{50}: 53 mg/L 3 d (Algae/water plant, Skeletonema costatum) ISO 10253 (Water quality - Marine Algal Growth Inhibition Test with Skeletonema costatum and Phaeodactylum tricornutum)
NOEC: 30 mg/L 3 d (Algae/water plant, Skeletonema costatum) ISO 10253 (Water quality - Marine Algal Growth Inhibition Test with Skeletonema costatum and Phaeodactylum tricornutum)

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

Additional ecotoxicological information:
Do not allow uncontrolled discharge of product into the environment.

* 12.2. Persistence and degradability

1,2-Ethanediol CAS No.: 107-21-1 EC No.: 203-473-3
Biodegradation: Yes, rapidly
disodium sebacate CAS No.: 17265-14-4 EC No.: 241-300-3
Biodegradation: Yes, rapidly

Biodegradation:
The single components are biodegradable.

* 12.3. Bioaccumulative potential

1,2-Ethanediol CAS No.: 107-21-1 EC No.: 203-473-3
Log K_{OW}: = -1.36
disodium sebacate CAS No.: 17265-14-4 EC No.: 241-300-3
Log K_{OW}: -4.9
Natrium-4(od.5)-methyl-1H-benzotriazolid CAS No.: 64665-57-2 EC No.: 265-004-9
Log K_{OW}: ≤ 1.091

Partition coefficient: n-octanol/water:
not applicable

Accumulation / Evaluation:
The product has not been tested.

12.4. Mobility in soil
The product has not been tested.

*
12.5. Results of PBT and vPvB assessment

1,2-Ethanediol CAS No.: 107-21-1 EC No.: 203-473-3	
Results of PBT and vPvB assessment: This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.	
disodium sebacate CAS No.: 17265-14-4 EC No.: 241-300-3	
Results of PBT and vPvB assessment: This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.	
Natrium-4(od.5)-methyl-1H-benzotriazolid CAS No.: 64665-57-2 EC No.: 265-004-9	
Results of PBT and vPvB assessment: This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.	

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Endocrine disrupting properties
This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects
No information available.

SECTION 13: Disposal considerations

*
13.1. Waste treatment methods
Dispose of waste according to applicable legislation.

13.1.1. Product/Packaging disposal

Waste codes/waste designations according to EWC/AVV
Directive 2008/98/EC (Waste Framework Directive)

HP 5	Specific Target Organ Toxicity (STOT)/Aspiration Toxicity
HP 6	Acute Toxicity

Waste treatment options
Appropriate disposal / Product:
Dispose of waste according to applicable legislation. Consult the appropriate local waste disposal expert about waste disposal.

Appropriate disposal / Package:
Non-contaminated packages may be recycled.

13.2. Additional information
The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

SECTION 14: Transport information

Land transport (ADR/RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
14.1. UN number or ID number			
No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.
14.2. UN proper shipping name			
No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.
14.3. Transport hazard class(es)			
not relevant	not relevant	not relevant	not relevant
14.4. Packing group			
not relevant	not relevant	not relevant	not relevant
14.5. Environmental hazards			
not relevant	not relevant	not relevant	not relevant
14.6. Special precautions for user			
not relevant	not relevant	not relevant	not relevant

14.7. Maritime transport in bulk according to IMO instruments

No transport as bulk according to IBC Code.

SECTION 15: Regulatory information

*

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

15.1.1. EU legislation

Other regulations (EU):

This product is not assigned to a hazard category.

15.1.2. National regulations

[DE] National regulations

Restrictions of occupation

Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).
Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Störfallverordnung (12. BImschV)

for substances contained in the product:

This product is not assigned to a hazard category.

Water hazard class

WGK:

1 - slightly hazardous to water

Source:

Self-classification (mixture; calculation rule).

Technische Regeln für Gefahrstoffe

TRGS 500
TRGS 510
TRGS 900

Berufsgenossenschaftliche Vorschriften (DGUV-Vorschriften)

Berufsgenossenschaftliche Informationen (DGUV-Informationen) 868
Berufsgenossenschaftliche Regeln (DGUV-Regeln) 189, 190, 192, 195

[SK] National regulations

Other regulations, restrictions and prohibition regulations

Zákon č. 67/2010 Z.z., o podmienkach uvedenia chemických látok a chemických zmesí na trh a o zmene a
doplnení niektorých zákonov (chemický zákon).
Zákon č. 124/2006 Z. z. o bezpečnosti a ochrane zdravia pri práci a o zmene a doplnení niektorých zákonov.
Zákon NR SR č. 355/2007 Z.z., o ochrane, podpore a rozvoji verejného zdravia a o zmene a doplnení niektorých
zákonov, v znení neskorších predpisov.
Nariadenie vlády SR 471/2011 Z.z., ktorým sa mení nariadenie vlády Slovenskej republiky č. 355/2006 Z. z.
o ochrane zamestnancov pred rizikami súvisiacimi s expozíciou chemickým faktorom pri práci, Príloha č.1.
Zákon č. 79/2015 Z.z. o odpadoch v znení neskorších predpisov.
Vyhláška MV SR č. 96/2004 Z.z., ktorou sa ustanovujú zásady protipožiarnej bezpečnosti pri manipulácii a
skladovaní horľavých kvapalín, ťažkých vykurovacích olejov a rastlinných a živočíšnych tukov a olejov.
Zákon NR SR č. 137/2010 Z.z. o ovzduší v znení neskorších predpisov.
Zákon č. 319/2013 Z.z. o pôsobnosti orgánov štátnej správy pre sprístupňovanie biocídnych výrobkov na trh a ich
používanie a o zmene a doplnení niektorých zákonov (biocídny zákon).

15.2. Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

*

15.3. Additional information

Tactile warning according to EN/ISO 11683.

SECTION 16: Other information

* 16.1. Indication of changes

1.1.	Product identifier
1.3.	Details of the supplier of the safety data sheet
1.4.	Emergency telephone number
2.1.	Classification of the substance or mixture
2.2.	Label elements
2.3.	Other hazards
3.2.	Mixtures
4.1.	Description of first aid measures
4.2.	Most important symptoms and effects, both acute and delayed
5.1.	Extinguishing media
6.1.	Personal precautions, protective equipment and emergency procedures
6.2.	Environmental precautions
7.1.	Precautions for safe handling
7.2.	Conditions for safe storage, including any incompatibilities
8.1.	Control parameters
8.2.	Exposure controls
9.1.	Information on basic physical and chemical properties
9.2.	Other information
10.1.	Reactivity
10.2.	Chemical stability
10.5.	Incompatible materials
10.6.	Hazardous decomposition products
11.1.	Information on hazard classes as defined in Regulation (EC) No 1272/2008
11.2.	Information on other hazards
12.1.	Toxicity
12.2.	Persistence and degradability
12.3.	Bioaccumulative potential
12.5.	Results of PBT and vPvB assessment
13.1.	Waste treatment methods
15.1.	Safety, health and environmental regulations/legislation specific for the substance or mixture
15.3.	Additional information
16.1.	Indication of changes
16.2.	Abbreviations and acronyms
16.3.	Key literature references and sources for data
16.4.	Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]
16.5.	List of relevant hazard statements and/or precautionary statements from sections 2 to 15

* 16.2. Abbreviations and acronyms

ACGIH	American Conference of Governmental Industrial Hygienists
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
CAS	Chemical Abstracts Service
CLP	Classification, Labelling and Packaging
DIN	German Institute for Standardization / German Industrial Standard
DNEL	derived no-effect level
EC_{50}	Effective Concentration 50%
EN	European Standard
ES	Exposure scenario
EWC	European Waste Catalogue
IBC	Intermediate Bulk Container
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
ISO	International Standards Organisation
KG	body weight

LC_{50}	Lethal (fatal) Concentration 50%
LD_{50}	Lethal (fatal) Dose 50%
MAK	Maximum concentration in the workplace air (CH)
NFPA	National Fire Protection Association
NOEC	No Observed Effect Concentration
OECD	Organisation for Economic Cooperation and Development
PBT	persistent and bioaccumulative and toxic
PNEC	Predicted No Effect Concentration
REACH	Registration, Evaluation and Authorization of Chemicals
RID	Dangerous goods regulations for transport by rail
TRGS	Technische Regeln für Gefahrstoffe
UN	United Nations

See overview table at www.euphrac.eu
For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

* 16.3. Key literature references and sources for data

EC 1907/2006 - REACH Regulation
1272/2008 EC - Regulation on classification, labeling and packaging of substances and mixtures, and amending Directives 67/548/EEC and 1999/45/EC and Regulation (EC) No 1907/2006
Regulation (EC) No 1907/2006 (REACH), Annex II
European Chemicals Agency (ECHA), C & L classification and labeling inventory
European Chemicals Agency (ECHA), ECHA CHEM Registered substances
OECD The Global Portal to Information on Chemical Substances (ChemPortal)
Institute for Occupational Safety and Health of the German Social Accident Insurance (IFA): GESTIS substance database and International limit values for chemical substances
Federal Environment Agency, Section IV 2.4: Documentation and Information Centre substances hazardous to water Rigoletto (catalog substances hazardous to water)

Substance name	Type	source of supply
1,2-Ethanediol CAS No.: 107-21-1 EC No.: 203-473-3	Classification of the substance or mixture	Source: European Chemicals Agency, http://echa.europa.eu/
disodium sebacate CAS No.: 17265-14-4 EC No.: 241-300-3	LD_{50} oral; LD_{50} dermal; LC_{50}; EC_{50}; NOEC	Source: European Chemicals Agency, http://echa.europa.eu/
Natrium-4(od.5)-methyl-1H-benzotriazolid CAS No.: 64665-57-2 EC No.: 265-004-9	LD_{50} oral; LD_{50} dermal; EC_{50}; NOEC	Source: European Chemicals Agency, http://echa.europa.eu/

* 16.4. Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

Hazard classes and hazard categories	Hazard statements	Classification procedure
Acute toxicity (oral) *(Acute Tox. 4)*	H302: Harmful if swallowed.	Calculation method.
STOT-repeated exposure *(STOT RE 2)*	H373: May cause damage to organs through prolonged or repeated exposure.	Calculation method.

* 16.5. List of relevant hazard statements and/or precautionary statements from sections 2 to 15

Hazard statements	
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H361d	Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.

16.6. Training advice

No data available

16.7. Additional information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

* Data changed compared with the previous version.