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 LGC Lobrid Glycerin Coolant Concentrate

Article No.:
1410128

* **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
Jöllenbecker Str. 2
33824 Werther
D
Telephone: +49 5203 9719 0
Telefax: +49 5203 9719 40
E-mail: kontakt@ravenol.de
Website: www.ravenol.de
E-mail (competent person): technik@ravenol.de

1.4. Emergency telephone number

Abt. Technik (Produktsicherheit), 24h: +49 700 24 112 112 (Contract ID: RAV) , +49 5203 9719 0 (Mo-Do 7.30 Uhr - 16.30 Uhr, Fr 7.30 Uhr - 13.15 Uhr) (Only available during office hours.)

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 pro cedure
Reproductive toxicity *(Repr. 2)*	H361d: Suspected of damaging the unborn child.	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:

GHS08
Health hazard

Signal word: Warning

Hazard components for labelling:
sodium 2-ethylhexanoate; ethane-1,2-diol

hazard statements for health hazards	
H361d	Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure. (...)

Supplemental Hazard information (EU): -

Precautionary statements	
P102	Keep out of reach of children.

Precautionary statements Prevention	
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statements Response	
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor/Emergency telephone number.

Precautionary statements Storage	
P405	Store locked up.

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

Additional information:
This product contains a bitter substance.

2.3. Other hazards
No data available

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]**	**Concen-tration**
CAS No.: 107-21-1 **EC No.:** 203-473-3 **REACH No.:** 01-2119456816-28-0000	**ethane-1,2-diol** Acute Tox. 4, STOT RE 2 **Warning** H302-H373	40 – < 80 Wt %
CAS No.: 19766-89-3 **EC No.:** 243-283-8	**sodium 2-ethylhexanoate** Repr. 2 H361d	2 – < 5 Wt %

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 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. Get immediate medical advice/attention.

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. Causes serious eye irritation.

After 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 place in recovery position and seek medical advice. Harmful if swallowed. May cause damage to organs.

Self-protection of the first aider:
First aider: Pay attention to self-protection! 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
Reference to other sections:
SECTION 2: Hazards identification
SECTION 11: Toxicological information

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:
alcohol resistant foam
Carbon dioxide (CO2)
Extinguishing powder
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. Remove all sources of ignition.

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

6.2. Environmental precautions
Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water. Immediately inform the responsible authorities in entry into waterways or sewage system.

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 (e.g. 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:
Harmful if swallowed. Do not breathe gas/vapour. Keep out of reach of children. Wash hands before breaks and after work. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Provide adequate ventilation. Vapours are heavier than air.

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

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

Environmental precautions:
See section 8.

Advices on general occupational hygiene

Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500. When using do not eat, drink, smoke, sniff. Remove contaminated, saturated clothing.

* 7.2. Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions:
Keep locked up and out of reach of children.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

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: 12 – non-combustible liquids that cannot be assigned to any of the above storage classes

Further information on storage conditions:
Keep container tightly closed in a cool, well-ventilated place.

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	ethane-1,2-diol CAS No.: 107-21-1	① 10 ppm (26 mg/m³) ② 20 ppm (52 mg/m³) ⑤ (kann über die Haut aufgenommen werden)
BE	ethane-1,2-diol CAS No.: 107-21-1	① 20 ppm (52 mg/m³) ③ 40 ppm (104 mg/m³) ⑤ (Aérosol)
CZ	ethane-1,2-diol CAS No.: 107-21-1	① 19.7 ppm (50 mg/m³) ② 39.4 ppm (100 mg/m³)
PL	ethane-1,2-diol CAS No.: 107-21-1	① 15 mg/m³ ② 50 mg/m³
NO	ethane-1,2-diol CAS No.: 107-21-1	① 20 ppm (52 mg/m³) ② 40 ppm (104 mg/m³) ⑤ (kan absorberes gjennom huden)

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**
TRGS 900 (DE)	ethane-1,2-diol CAS No.: 107-21-1	① 10 ppm (26 mg/m³) ② 20 ppm (52 mg/m³) ⑤ (kann über die Haut aufgenommen werden)
IE	ethane-1,2-diol CAS No.: 107-21-1	① 10 mg/m³ ⑤ (may be absorbed through the skin)
IE	ethane-1,2-diol CAS No.: 107-21-1	① 20 ppm (52 mg/m³) ② 40 ppm (104 mg/m³) ⑤ (vapour, may be absorbed through the skin)
MY	ethane-1,2-diol CAS No.: 107-21-1	③ 39.4 ppm (100 mg/m³)
FI	ethane-1,2-diol CAS No.: 107-21-1	① 20 ppm (50 mg/m³) ② 40 ppm (100 mg/m³) ⑤ (kan absorberas genom huden)
LT	ethane-1,2-diol CAS No.: 107-21-1	① 10 ppm (25 mg/m³) ② 20 ppm (50 mg/m³) ⑤ (garų ir Aerozolis)
SE	ethane-1,2-diol CAS No.: 107-21-1	① 10 ppm (25 mg/m³) ② 40 ppm (104 mg/m³) ⑤ (kan absorberas genom huden)
SK	ethane-1,2-diol CAS No.: 107-21-1	① 20 ppm (52 mg/m³) ② 40 ppm (104 mg/m³) ⑤ (rátajte so vstrebávaním cez pokožku)
MAK (AT)	ethane-1,2-diol CAS No.: 107-21-1	① 10 ppm (26 mg/m³) ⑤ (kann über die Haut aufgenommen werden)
DK	ethane-1,2-diol CAS No.: 107-21-1	① 10 mg/m³ ② 20 mg/m³
DK	ethane-1,2-diol CAS No.: 107-21-1	① 10 ppm (26 mg/m³) ② 20 ppm (52 mg/m³) ⑤ (kan optages gennem huden)
MAK (AT)	ethane-1,2-diol CAS No.: 107-21-1	② 20 ppm (52 mg/m³) ⑤ (max. 8x5 min./Schicht, Momentanwert, kann über die Haut aufgenommen werden)
BG	ethane-1,2-diol CAS No.: 107-21-1	① 20 ppm (52 mg/m³) ② 40 ppm (104 mg/m³) ⑤ (трябва да се очаква абсорбиране през кожата)
HR	ethane-1,2-diol CAS No.: 107-21-1	① 20 ppm (52 mg/m³) ② 40 ppm (104 mg/m³)
ES	ethane-1,2-diol CAS No.: 107-21-1	① 20 ppm (52 mg/m³) ② 40 ppm (104 mg/m³) ⑤ (puede ser absorbido a través dérmica)
RO	ethane-1,2-diol CAS No.: 107-21-1	① 20 ppm (52 mg/m³) ② 40 ppm (104 mg/m³)
EE	ethane-1,2-diol CAS No.: 107-21-1	① 20 ppm (52 mg/m³) ② 40 ppm (104 mg/m³)
LV	ethane-1,2-diol CAS No.: 107-21-1	① 20 ppm (52 mg/m³) ② 40 ppm (104 mg/m³) ⑤ (var absorbet caur adu)
Alberta (CA)	ethane-1,2-diol CAS No.: 107-21-1	③ 100 mg/m³

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
BC (CA)	ethane-1,2-diol CAS No.: 107-21-1	③ 100 mg/m³ ⑤ (Aerosol)
BC (CA)	ethane-1,2-diol CAS No.: 107-21-1	① 10 mg/m³ ② 20 mg/m³ ⑤ (particles)
BC (CA)	ethane-1,2-diol CAS No.: 107-21-1	③ 50 mg/m³ ⑤ (vapor)
IOELV (EU)	ethane-1,2-diol CAS No.: 107-21-1	① 20 ppm (52 mg/m³) ② 40 ppm (104 mg/m³) ⑤ (may be absorbed through the skin)
VRI (FR)	ethane-1,2-diol CAS No.: 107-21-1	① 20 ppm (52 mg/m³) ② 40 ppm (104 mg/m³) ⑤ (peut être absorbé par la peau)
WEL (GB)	ethane-1,2-diol CAS No.: 107-21-1	① 20 ppm (52 mg/m³) ② 40 ppm (104 mg/m³) ⑤ (vapour, may be absorbed through the skin)
SI	ethane-1,2-diol CAS No.: 107-21-1	① 20 ppm (52 mg/m³) ② 40 ppm (104 mg/m³) ⑤ (računati je treba z možnostjo prodiranja skozi kožo)
TW	ethane-1,2-diol CAS No.: 107-21-1	① 10 mg/m³ ⑤ (蒸汽)
TW	ethane-1,2-diol CAS No.: 107-21-1	③ 50 ppm (127 mg/m³) ⑤ (霧)
WEL (GB)	ethane-1,2-diol CAS No.: 107-21-1	① 10 mg/m³ ⑤ (may be absorbed through the skin)
KR	ethane-1,2-diol CAS No.: 107-21-1	③ 40 ppm (100 mg/m³) ⑤ (증기 와(과) 연무)
IS	ethane-1,2-diol CAS No.: 107-21-1	① 10 ppm (26 mg/m³) ② 40 ppm (104 mg/m³) ⑤ (efnið getur auðveldlega borist inn í líkamann gegnum húð)
IS	ethane-1,2-diol CAS No.: 107-21-1	① 10 ppm (26 mg/m³) ⑤ (úðaefni, efnið getur auðveldlega borist inn í líkamann gegnum húð)
CN	ethane-1,2-diol CAS No.: 107-21-1	① 20 mg/m³ ② 40 mg/m³
HU	ethane-1,2-diol CAS No.: 107-21-1	① 52 mg/m³ ② 104 mg/m³
RU	ethane-1,2-diol CAS No.: 107-21-1	① 5 mg/m³ ③ 10 mg/m³
GR	ethane-1,2-diol CAS No.: 107-21-1	① 50 ppm (125 mg/m³) ② 50 ppm (125 mg/m³)
NL	ethane-1,2-diol CAS No.: 107-21-1	① 52 mg/m³ ② 104 mg/m³ ⑤ (damp)
ACGIH (US)	ethane-1,2-diol CAS No.: 107-21-1	② 10 mg/m³ ⑤ (inhalable fraction Aerosol)
NL	ethane-1,2-diol CAS No.: 107-21-1	① 10 mg/m³ ⑤ (deeltjes)

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
ACGIH (US)	ethane-1,2-diol CAS No.: 107-21-1	① 25 ppm ② 50 ppm ⑤ (vapor)
Québec (CA)	ethane-1,2-diol CAS No.: 107-21-1	③ 50 ppm (127 mg/m³)
CH	glycerol CAS No.: 56-81-5	① 50 mg/m³ ② 100 mg/m³ ⑤ (einatembare Fraktion)
CZ	glycerol CAS No.: 56-81-5	① 2.44 ppm (10 mg/m³) ② 3.66 ppm (15 mg/m³)
PL	glycerol CAS No.: 56-81-5	① 10 mg/m³
IE	glycerol CAS No.: 56-81-5	① 10 mg/m³
FI	glycerol CAS No.: 56-81-5	① 20 mg/m³
MY	glycerol CAS No.: 56-81-5	① 10 mg/m³
OSHA (US)	glycerol CAS No.: 56-81-5	① 15 mg/m³ ⑤ inhalable fraction
HR	glycerol CAS No.: 56-81-5	① 10 mg/m³
BE	glycerol CAS No.: 56-81-5	① 10 mg/m³ ⑤ (brouillard)
EE	glycerol CAS No.: 56-81-5	① 10 mg/m³
Alberta (CA)	glycerol CAS No.: 56-81-5	① 10 mg/m³
BC (CA)	glycerol CAS No.: 56-81-5	① 10 mg/m³ ⑤ (mist)
BC (CA)	glycerol CAS No.: 56-81-5	① 3 mg/m³ ⑤ (respirable fraction)
ES	glycerol CAS No.: 56-81-5	① 10 mg/m³
SK	glycerol CAS No.: 56-81-5	① 10 mg/m³
VLA (FR)	glycerol CAS No.: 56-81-5	① 10 mg/m³ ⑤ (Aérosol)
KR	glycerol CAS No.: 56-81-5	① 10 mg/m³
WEL (GB)	glycerol CAS No.: 56-81-5	① 10 mg/m³
GR	glycerol CAS No.: 56-81-5	① 10 mg/m³
TRGS 900 (DE)	glycerol CAS No.: 56-81-5	① 200 mg/m³ ② 400 mg/m³ ⑤ (einatembare Fraktion)
OSHA (US)	glycerol CAS No.: 56-81-5	① 5 mg/m³ ⑤ (respirable fraction)
Québec (CA)	glycerol CAS No.: 56-81-5	① 10 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
ethane-1,2-diol CAS No.: 107-21-1	35 mg/m³	① DNEL worker ② DNEL acute inhalative (local)
ethane-1,2-diol CAS No.: 107-21-1	106 mg/kg bw/day	① DNEL worker ② DNEL long-term dermal (systemic)
sodium 2-ethylhexanoate CAS No.: 19766-89-3	14 mg/m³	① DNEL worker ② DNEL long-term inhalative (systemic)

Substance name	PNEC Value	① PNEC type
ethane-1,2-diol CAS No.: 107-21-1	10 mg/l	① PNEC aquatic, freshwater
ethane-1,2-diol CAS No.: 107-21-1	1 mg/l	① PNEC aquatic, marine water
ethane-1,2-diol CAS No.: 107-21-1	37 mg/kg	① PNEC sediment, freshwater
ethane-1,2-diol CAS No.: 107-21-1	3.7 mg/kg	① PNEC sediment, marine water
ethane-1,2-diol CAS No.: 107-21-1	199.5 mg/l	① PNEC sewage treatment plant (STP)

*
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: DIN 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 (maximum wearing 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.

Other protection measures:
Wash hands before breaks and after work.

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		at °C	Method	Remark
pH	*not determined*			
Melting point	*not determined*			
Freezing point	≈ -37 °C			Mix 50/50% with water
Initial boiling point and boiling range	*not determined*			
Decomposition temperature	*not determined*			
Flash point	*not determined*			
Evaporation rate	*not determined*			
Auto-ignition temperature	*not determined*			
Upper/lower flammability or explosive limits	*not determined*			
Vapour pressure	*not determined*			
Vapour density	*not determined*			
Density	1,140 kg/m³	20 °C		
Bulk density	*not determined*			
Water solubility	*not determined*			
Partition coefficient: n-octanol/ water	*not determined*			
Dynamic viscosity	*not determined*			
Kinematic viscosity	*not determined*			

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

No known hazardous reactions. hygroscopic.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

* **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

Oxidising agent, strong
Acid, concentrated

10.6. Hazardous decomposition products

The product is stable under storage at normal ambient temperatures.

SECTION 11: Toxicological information

* **11.1. Information on toxicological effects**

CAS No.	Substance name	Toxicological information
107-21-1	ethane-1,2-diol	**LD_{50} oral:** 4,700 mg/kg (rat) **LD_{50} dermal:** 10,600 mg/kg (canin)

Acute oral toxicity:
ATEmix calculated: 2016 mg/kg
Based on available data, the classification criteria are not met.

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:
No irritant effect. Frequently or prolonged contact with skin may cause dermal irritation.

Serious eye damage/irritation:
No irritant effect.

Respiratory or skin sensitisation:
No sensitizing effects known.

Germ cell mutagenicity:
No indications of human germ cell mutagenicity exist.

Carcinogenicity:
No indication of human carcinogenicity.

Reproductive toxicity:
Suspected of damaging the unborn child.

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

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

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

SECTION 12: Ecological information

*
12.1. Toxicity

CAS No.	Substance name	Toxicological information
107-21-1	ethane-1,2-diol	**LC_{50}:** 8,050 – 72,900 mg/l 4 d **EC_{50}:** >100 mg/l 2 d **ErC_{50}:** 6,500 – 13,000 mg/l 4 d **NOEC:** 72,860 mg/l -∞ h **NOEC:** 8,590 mg/l -∞ h

Assessment/classification:
The substance/mixture does not fullfill the criteria of the acute aquatic toxicity according to Regulation (EC) No 1272/2008 [CLP], Annex I.

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

12.2. Persistence and degradability

CAS No.	Substance name	Biodegradation	Remark
107-21-1	ethane-1,2-diol	Yes, rapidly	

Biodegradation:
Readily biodegradable. Data apply to the technically active substance.

Additional information:
The product has not been tested.

*
12.3. Bioaccumulative potential

CAS No.	Substance name	Log K_{OW}	Bioconcentration factor (BCF)
107-21-1	ethane-1,2-diol	-1.36	

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

CAS No.	Substance name	Results of PBT and vPvB assessment
107-21-1	ethane-1,2-diol	The substance in the mixture does not meet the PBT/vPvB criteria according to REACH, annex XIII.
19766-89-3	sodium 2-ethylhexanoate	The substance in the mixture does not meet the PBT/vPvB criteria according to REACH, annex XIII.

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

12.6. 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

Waste code packaging:

Remark:

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

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.

SECTION 14: Transport information

No dangerous good in sense of these transport regulations.

Land transport (ADR/RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	
* **14.1. UN-No.**			
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.	
14.3. Transport hazard class(es)			
not relevant			
14.4. Packing group			
not relevant			
14.5. Environmental hazards			
not relevant			
14.6. Special precautions for user			
not relevant			

* **14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

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):

Use restriction according to REACH annex XVII, no.:
ethanediol

15.1.2. National regulations

[DE] National regulations

Restrictions of occupation

Observe restrictions to employment for juvenils 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.

Water hazard class (WGK)

WGK:

1 - schwach wassergefährdend

Source:

Self-classification (mixture; calculation rule).

Technische Regeln für Gefahrstoffe

Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500.

Berufsgenossenschaftliche Vorschriften (BGV)

Berufsgenossenschaftliche Informationen (BGI) 868
Berufsgenossenschaftliche Regeln (BGR) 189, 190, 192, 195

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. Child-resistant fastenings (EN/862/ISO 8317).

SECTION 16: Other information

16.1. Indication of changes

1.2.	Relevant identified uses of the substance or mixture and uses advised against
2.1.	Classification of the substance or mixture
2.2.	Label elements
3.2.	Mixtures
4.1.	Description of first aid measures
5.1.	Extinguishing media
5.2.	Special hazards arising from the substance or mixture
6.1.	Personal precautions, protective equipment and emergency procedures
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
10.3.	Possibility of hazardous reactions
11.1.	Information on toxicological effects
12.1.	Toxicity
12.3.	Bioaccumulative potential
12.4.	Mobility in soil
14.1.	UN number
14.2.	UN proper shipping name
14.7.	Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
16.5.	Relevant R-, H- and EUH-phrases (Number and full text)

16.2. Abbreviations and acronyms

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

67/548/EEC - Dangerous Substances Directive
1999/45/EEC - Dangerous Preparations Directive
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)

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

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

Hazard classes and hazard categories	Hazard statements	Classification pro cedure
Reproductive toxicity *(Repr. 2)*	H361d: Suspected of damaging the unborn child.	Calculation method.
STOT-repeated exposure *(STOT RE 2)*	H373: May cause damage to organs through prolonged or repeated exposure. (...)	Calculation method.

*

16.5. Relevant R-, H- and EUH-phrases (Number and full text)

Hazard statements	
H302	Harmful if swallowed.
H361d	Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure. (...)

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