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## 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 DOT 4 LV

Article No.:

1350615

UFI:

MUKV-25AT-TMNC-XT7T

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

Use of the substance/mixture:

Bremsflüssigkeit

#### 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: +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
Reproductive toxicity (Repr. 2)	H361fd: Suspected of damaging fertility. Suspected of damaging the unborn child.	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:

tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate

Hazard statements for health hazards	
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.



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**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**

P201	Obtain special instructions before use.
P280	Wear protective gloves and eye protection/face protection.

**Precautionary statements Response**

P308 + P313	IF exposed or concerned: Get medical advice/attention.
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**Precautionary statements Storage**

P405	Store locked up.
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**Precautionary statements Disposal**

P501	Dispose of contents/container to an appropriate recycling or disposal facility.
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**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.: 30989-05-0 EC No.: 250-418-4 REACH No.: 01-2119462824-33	<b>tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate</b> Repr. 2 (H361fd) ⚠ Warning <b>Acute Toxicity Estimate</b> ATE (oral) > 2,000 mg/kg ATE (dermal) > 2,000 mg/kg	≥ 30 - < 50 weight-%
REACH No.: 01-2119475115-41	<b>Reaktionsmasse aus 2-(2-(2-Butoxyethoxy)ethoxy)ethanol und 3,6,9,12-Tetraoxahexadecan-1-ol</b> Eye Dam. 1 (H318) ⚠ Danger <b>Specific concentration limit (SCL)</b> Eye Irrit. 2; H319: 20% ≤ C < 30% Eye Dam. 1; H318: C ≥ 30% <b>Acute Toxicity Estimate</b> ATE (oral) > 5,000 mg/kg ATE (dermal) 3,540 mg/kg	≥ 3 - < 10 weight-%
CAS No.: 110-97-4 EC No.: 203-820-9 Index No.: 603-083-00-7 REACH No.: 01-2119475444-34	<b>1,1'-iminodiprop-2-ol</b> Eye Irrit. 2 (H319) ⚠ Warning <b>Acute Toxicity Estimate</b> ATE (oral) > 2,000 mg/kg ATE (dermal) 8,000 mg/kg	≥ 1 - < 10 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:**

Take off immediately all contaminated clothing.

**Following inhalation:**

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

**In case of skin contact:**

After contact with skin, wash immediately with plenty of water and soap.

Generally the product does not irritate the skin. Frequently or prolonged contact with skin may cause dermal irritation.



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**After eye contact:**

Rinse immediately carefully and thoroughly with eye-bath or water.

**Following ingestion:**

Seek medical advice immediately.

**Self-protection of the first aider:**

First aider: Pay attention to self-protection!

**4.2. Most important symptoms and effects, both acute and delayed**

Suspected of damaging the unborn child. Suspected of damaging fertility.

**4.3. Indication of any immediate medical attention and special treatment needed**

No information available.

**SECTION 5: Firefighting measures**

**5.1. Extinguishing media**

**Suitable extinguishing media:**

Carbon dioxide (CO<sub>2</sub>), Extinguishing powder, Water spray jet.

In case of major fire and large quantities: Water spray jet, alcohol resistant foam

**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

**Hazardous combustion products:**

Nitrogen oxides (NO<sub>x</sub>), Carbon monoxide, Carbon dioxide (CO<sub>2</sub>)

**5.3. Advice for firefighters**

In case of fire: Wear self-contained breathing apparatus. Wear eye protection/face protection.

**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:**

Special danger of slipping by leaking/spilling product.

**Protective equipment:**

Wear personal protection equipment (refer to section 8).

**Emergency procedures:**

Remove persons to safety. Provide adequate ventilation.

**6.1.2. For emergency responders**

**Personal protection equipment:**

Wear personal protection equipment (refer to section 8).

**6.2. Environmental precautions**

Avoid release to the environment.

Clear spills immediately.

Do not allow to enter into surface water or drains.

**6.3. Methods and material for containment and cleaning up**

**For containment:**

Suitable material for taking up: Kieselguhr, Universal binder, Sawdust

**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**

Safe handling: see section 7

Disposal: see section 13

Personal protection equipment: see section 8



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## 6.5. Additional information

Clear spills immediately.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

#### Protective measures

##### Advices on safe handling:

Provide adequate ventilation.  
 To follow: Advices on general occupational hygiene.  
 When using do not eat, drink or smoke.  
 Wash hands thoroughly after handling.

##### Fire prevent measures:

Keep away from clothing and other combustible materials.

##### Measures to prevent aerosol and dust generation:

Use only in well-ventilated areas.

##### 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.  
 Wash hands before breaks and after work.  
 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/Store only in original container. Keep container tightly closed. Protect from moisture.

#### Requirements for storage rooms and vessels:

No special measures are necessary.

#### Hints on storage assembly:

not required

**Storage class (TRGS 510, Germany):** 10 - Combustible liquids that cannot be assigned to any of the above storage classes

#### Further information on storage conditions:

Keep container tightly closed.

### 7.3. Specific end use(s)

#### Recommendation:

Observe technical data sheet.

## 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
RU	<b>1,1'-iminodipropan-2-ol</b> CAS No.: 110-97-4 EC No.: 203-820-9	③ 1 mg/m <sup>3</sup> ⑤ A

#### 8.1.2. Biological limit values

No data available

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**8.1.3. DNEL-/PNEC-values**

Substance name	DNEL value	① DNEL type ② Exposure route
<b>tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate</b> CAS No.: 30989-05-0 EC No.: 250-418-4	29.1 mg/m <sup>3</sup>	① DNEL worker ② Long-term - inhalation, systemic effects
<b>tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate</b> CAS No.: 30989-05-0 EC No.: 250-418-4	7.2 mg/m <sup>3</sup>	① DNEL Consumer ② Long-term - inhalation, systemic effects
<b>tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate</b> CAS No.: 30989-05-0 EC No.: 250-418-4	8.3 mg/kg bw/day	① DNEL worker ② Long-term - dermal, systemic effects
<b>tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate</b> CAS No.: 30989-05-0 EC No.: 250-418-4	4.1 mg/kg bw/day	① DNEL Consumer ② Long-term - dermal, systemic effects

Substance name	PNEC Value	① PNEC type
<b>tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate</b> CAS No.: 30989-05-0 EC No.: 250-418-4	211.2 µg/L	① PNEC aquatic, freshwater
<b>tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate</b> CAS No.: 30989-05-0 EC No.: 250-418-4	21.12 µg/L	① PNEC aquatic, marine water
<b>tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate</b> CAS No.: 30989-05-0 EC No.: 250-418-4	100 mg/L	① PNEC sewage treatment plant
<b>tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate</b> CAS No.: 30989-05-0 EC No.: 250-418-4	0.76 mg/kg bw/day	① PNEC sediment, freshwater
<b>tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate</b> CAS No.: 30989-05-0 EC No.: 250-418-4	0.076 mg/kg bw/day	① PNEC sediment, marine water

**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  
Wear eye/face protection. EN 166

**Skin protection:**

Hand protection  
Suitable material: Butyl caoutchouc (butyl rubber)  
Thickness of the glove material: ≥ 0,7 mm



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Breakthrough time: 480 min

By short-term hand contact:  
 Suitable material: NBR (Nitrile rubber)  
 Thickness of the glove material: 0,4 mm  
 Permeation time (maximum wear duration): 30 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.  
 Avoid breathing vapours.  
 Provide adequate ventilation.

**Other protection measures:**

Do not put any product-impregnated cleaning rags into your trouser pockets.  
 Wear personal protection equipment (refer to section 8).  
 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 **Form:** Liquid  
**Colour:** yellow **Odour:** characteristic  
**flammability:** Yes

**Safety relevant basis data**

Parameter	Value	at °C	① Method ② Remark
pH	8	20 °C	② Concentration: 50 %
Melting point	<i>No data available</i>		
Freezing point	-70 °C		
Initial boiling point and boiling range	265 °C		
Decomposition temperature	<i>not applicable</i>		
Flash point	136 °C		
Evaporation rate	<i>No data available</i>		
Auto-ignition temperature	> 300 °C		
Upper/lower flammability or explosive limits	<i>not applicable</i>		
Vapour pressure	0.27 Pa	20 °C	
Vapour density	<i>not applicable</i>		
Density	1.06 g/cm <sup>3</sup>	20 °C	
Relative density	<i>not applicable</i>		
Bulk density	<i>not applicable</i>		
Water solubility	completely miscible		
Partition coefficient: n-octanol/water	<i>not applicable</i>		
Dynamic viscosity	13 mPa* s		
Kinematic viscosity	<i>No data available</i>		

**9.2. Other information**

Not applicable



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## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No known hazardous reactions.

### 10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

### 10.3. Possibility of hazardous reactions

No data available

### 10.4. Conditions to avoid

No special measures are necessary.  
To avoid thermal decomposition do not overheat.

### 10.5. Incompatible materials

Materials to avoid: Oxidising agent, strong, Reducing agent, strong, Acid, concentrated, Alkali (lye), concentrated

### 10.6. Hazardous decomposition products

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

## SECTION 11: Toxicological information

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

<b>tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate</b> CAS No.: 30989-05-0 EC No.: 250-418-4
<b>LD<sub>50</sub> oral:</b> >2,000 mg/kg (Rat)
<b>LD<sub>50</sub> dermal:</b> >2,000 mg/kg (Rat)
<b>Reaktionsmasse aus 2-(2-(2-Butoxyethoxy)ethoxy)ethanol und 3,6,9,12-Tetraoxahexadecan-1-ol</b>
<b>LD<sub>50</sub> oral:</b> >5,000 mg/kg (Rat)
<b>LD<sub>50</sub> dermal:</b> 3,540 mg/kg (Rabbit)
<b>1,1'-iminodipropen-2-ol</b> CAS No.: 110-97-4 EC No.: 203-820-9
<b>LD<sub>50</sub> oral:</b> >2,000 mg/kg (Rat) OECD Prüfrichtlinie 401
<b>LD<sub>50</sub> dermal:</b> 8,000 mg/kg (Rabbit)

#### Acute oral toxicity:

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:

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:

Suspected of damaging fertility. Suspected of damaging the unborn child.

#### STOT-single exposure:

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

#### STOT-repeated exposure:

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

#### Aspiration hazard:

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

#### Additional information:

No data available



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## 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 data available

## SECTION 12: Ecological information

### 12.1. Toxicity

<b>tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate</b> CAS No.: 30989-05-0 EC No.: 250-418-4
<b>LC<sub>50</sub></b> : >222.2 mg/L 4 d (fish, <i>Oncorhynchus mykiss</i> (previous name: <i>Salmo gairdneri</i> ))
<b>EC<sub>50</sub></b> : >224.4 mg/L 3 d (Algae/water plant, <i>Raphidocelis subcapitata</i> (new name: <i>Pseudokirchneriella subcapitata</i> ))
<b>EC<sub>50</sub></b> : >211.2 mg/L 2 d (crustaceans, <i>Daphnia magna</i> ) OECD Guideline 202 ( <i>Daphnia</i> sp. Acute Immobilisation Test)
<b>NOEC</b> : 224.4 mg/L 3 d (Algae/water plant, <i>Raphidocelis subcapitata</i> (new name: <i>Pseudokirchneriella subcapitata</i> ))
<b>NOEC</b> : <211.2 mg/L 1 d (crustaceans, <i>Daphnia magna</i> ) OECD Guideline 202 ( <i>Daphnia</i> sp. Acute Immobilisation Test)
<b>NOEC</b> : <211.2 mg/L 2 d (crustaceans, <i>Daphnia magna</i> ) OECD Guideline 202 ( <i>Daphnia</i> sp. Acute Immobilisation Test)
<b>Reaktionsmasse aus 2-(2-(2-Butoxyethoxy)ethoxy)ethanol und 3,6,9,12-Tetraoxahexadecan-1-ol</b>
<b>LC<sub>50</sub></b> : 2,210 mg/L 2 d (crustaceans, <i>Daphnia magna</i> (Big water flea))
<b>LC<sub>50</sub></b> : 2,400 mg/L
<b>1,1'-iminodiprop-2-ol</b> CAS No.: 110-97-4 EC No.: 203-820-9
<b>LC<sub>50</sub></b> : 1,466 mg/L 4 d (fish, <i>Danio rerio</i> (zebrafish)) OECD Prüfrichtlinie 203
<b>LC<sub>50</sub></b> : 1,466 mg/L 4 d (fish, <i>Danio rerio</i> (previous name: <i>Brachydanio rerio</i> )) OECD Guideline 203 (Fish, Acute Toxicity Test)
<b>EC<sub>50</sub></b> : 339 mg/L 3 d (Algae/water plant, <i>Desmodesmus subspicatus</i> (previous name: <i>Scenedesmus subspicatus</i> )) German industrial standard DIN 38412, part 9
<b>EC<sub>50</sub></b> : 277.7 mg/L 2 d (crustaceans, <i>Daphnia magna</i> ) 79/831/EEC, C.2
<b>NOEC</b> : 125 mg/L 3 d (Algae/water plant, <i>Desmodesmus subspicatus</i> (previous name: <i>Scenedesmus subspicatus</i> )) German industrial standard DIN 38412, part 9
<b>NOEC</b> : 464 mg/L 4 d (fish, <i>Danio rerio</i> (previous name: <i>Brachydanio rerio</i> )) OECD Guideline 203 (Fish, Acute Toxicity Test)
<b>LOEC</b> : 250 mg/L 3 d (Algae/water plant, <i>Desmodesmus subspicatus</i> (previous name: <i>Scenedesmus subspicatus</i> )) German industrial standard DIN 38412, part 9

### 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

<b>tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate</b> CAS No.: 30989-05-0 EC No.: 250-418-4
<b>Biodegradation</b> : Yes, rapidly
<b>Reaktionsmasse aus 2-(2-(2-Butoxyethoxy)ethoxy)ethanol und 3,6,9,12-Tetraoxahexadecan-1-ol</b>
<b>Biodegradation</b> : Yes, rapidly
<b>1,1'-iminodiprop-2-ol</b> CAS No.: 110-97-4 EC No.: 203-820-9
<b>Biodegradation</b> : Yes, rapidly

### Additional information:

The product has not been tested.

### 12.3. Bioaccumulative potential

<b>tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate</b> CAS No.: 30989-05-0 EC No.: 250-418-4
<b>Log K<sub>ow</sub></b> : < 3
<b>1,1'-iminodiprop-2-ol</b> CAS No.: 110-97-4 EC No.: 203-820-9
<b>Log K<sub>ow</sub></b> : -0.79
<b>Bioconcentration factor (BCF)</b> : 3.162 Species: other: fish

### Partition coefficient: n-octanol/water:

not applicable



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**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**

<b>tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate</b> CAS No.: 30989-05-0 EC No.: 250-418-4
<b>Results of PBT and vPvB assessment:</b> This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.
<b>Reaktionsmasse aus 2-(2-(2-Butoxyethoxy)ethoxy)ethanol und 3,6,9,12-Tetraoxahexadecan-1-ol</b>
<b>Results of PBT and vPvB assessment:</b> —
<b>1,1'-iminodipropan-2-ol</b> CAS No.: 110-97-4 EC No.: 203-820-9
<b>Results of PBT and vPvB assessment:</b> 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**

**Waste code product**

16 01 13 *	brake fluids
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\*: Evidence for disposal must be provided.

**Directive 2008/98/EC (Waste Framework Directive)**

HP 10	Toxic for reproduction
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**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)
<b>14.1. UN number or ID number</b>			
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.
<b>14.2. UN proper shipping name</b>			
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.
<b>14.3. Transport hazard class(es)</b>			
not relevant	not relevant	not relevant	not relevant
<b>14.4. Packing group</b>			
not relevant	not relevant	not relevant	not relevant
<b>14.5. Environmental hazards</b>			
not relevant	not relevant	not relevant	not relevant



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Land transport (ADR/RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
<b>14.6. Special precautions for user</b>			
not relevant	not relevant	not relevant	not relevant

**14.7. Maritime transport in bulk according to IMO instruments**

Transport in bulk according to Annex II of Marpol and the 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 employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers. Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

**Störfallverordnung (12. BlmschV)****for substances contained in the product:**

This product is not assigned to a hazard category.

**Technische Anleitung zur Reinhaltung der Luft (TA-Luft)****Remark:**

To follow: 5.2.5

**Water hazard class****WGK:**

1 - slightly hazardous to water

**Source:**

Self-classification (mixture; calculation rule).

**Technische Regeln für Gefahrstoffe**

TRGS 500

TRGS 510

**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.



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## SECTION 16: Other information

### 16.1. Indication of changes

not applicable

### 16.2. Abbreviations and acronyms

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
BCF	Bioconcentration Factor
CAS	Chemical Abstracts Service
CLP	Classification, Labelling and Packaging
DIN	German Institute for Standardization / German Industrial Standard
DNEL	derived no-effect level
EC <sub>50</sub>	Effective Concentration 50%
EN	European Standard
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 <sub>50</sub>	Lethal (fatal) Concentration 50%
LD <sub>50</sub>	Lethal (fatal) Dose 50%
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
SCL	Specific concentration limit
TRGS	Technische Regeln für Gefahrstoffe
UN	United Nations

See overview table at [www.euphrac.eu](http://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
<b>tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate</b> CAS No.: 30989-05-0 EC No.: 250-418-4	LC <sub>50</sub> ; EC <sub>50</sub> ; NOEC	Source: European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
<b>1,1'-iminodipropan-2-ol</b> CAS No.: 110-97-4 EC No.: 203-820-9	LC <sub>50</sub> ; EC <sub>50</sub> ; NOEC; LOEC	Source: European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>



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**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
Reproductive toxicity ( <i>Repr. 2</i> )	H361fd: Suspected of damaging fertility. Suspected of damaging the unborn child.	Calculation method.

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

Hazard statements	
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.

**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.