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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 Kaltreiniger lösemittelfrei

Article No.:

1360002

UFI:

1UWF-VEHU-1U0X-YR7N

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

Use of the substance/mixture:

Reiniger

#### \* 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 |
|---|----------------------------------|--------------------------|
| Serious eye damage/eye irritation<br>(Eye Dam. 1) | H318: Causes serious eye damage. | Calculation method.      |

#### \* 2.2. Label elements

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

Hazard pictograms:



GHS05

Corrosion

Signal word: Danger

Hazard components for labelling:

Isotridecanol, ethoxylated

| Hazard statements for health hazards |                            |
|--------------------------------------|----------------------------|
| H318                                 | Causes serious eye damage. |



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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**

|      |   |
|------|---|
| P280 | Wear protective gloves and eye/face protection. |
|------|---|

**Precautionary statements Response**

|                    |  |
|--------------------|--|
| P305 + P351 + P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P310               | Immediately call a POISON CENTER/doctor/Emergency telephone number.  |

**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****Additional information:**

Labelling for contents according to regulation (EC) No. 648/2004 non-ionic surfactants, phosphates 5- <15%, perfumes <5%

**Hazardous ingredients / Hazardous impurities / Stabilisers:**

| Product identifiers   | Substance name<br>Classification according to Regulation (EC) No 1272/2008 [CLP]         | Concentration           |
|---|--|-------------------------|
| CAS No.: 69011-36-5<br>EC No.: 500-241-6<br>REACH No.:<br>01-2119976362-32-0000                     | <b>Isotridecanol, ethoxylated</b><br>Acute Tox. 4 (H302), Eye Dam. 1 (H318)<br>⚠️ Danger | 2.5 - < 10<br>weight-%  |
| CAS No.: 7320-34-5<br>EC No.: 230-785-7   | <b>tetrapotassium pyrophosphate</b><br>Eye Irrit. 2 (H319)<br>⚠️ Warning                 | 2.5 - < 10<br>weight-%  |
| CAS No.: 112-34-5<br>EC No.: 203-961-6<br>Index No.: 603-096-00-8<br>REACH No.:<br>01-2119475104-44 | <b>2-(2-butoxyethoxy)ethanol</b><br>Eye Irrit. 2 (H319)<br>⚠️ Warning                    | 2.5 - < 10<br>weight-%  |
| CAS No.: 28348-53-0<br>EC No.: 248-983-7  | <b>sodium cumenesulphonate</b><br>Eye Irrit. 2 (H319)<br>⚠️ Warning                      | 0.1 - < 2.5<br>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:**

Provide fresh air. Consult a doctor immediately in the case of inhaling spray mist and show him packing or label. In case of respiratory tract irritation, consult a physician.

**In case of skin contact:**

After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water and soap. In case of skin irritation, consult a physician.

**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. Causes serious eye irritation.



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#### Following ingestion:

Rinse mouth thoroughly with water. If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

#### 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

Serious eye damage/eye irritation.

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

Treat symptomatically. Observe risk of aspiration if vomiting occurs.

### SECTION 5: Firefighting measures

#### \* 5.1. Extinguishing media

##### Suitable extinguishing media:

In case of fire, use sand, extinguishing powder or alcohol resistant foam. Non-combustible liquids.

##### Unsuitable extinguishing media:

Full water jet

#### \* 5.2. Special hazards arising from the substance or mixture

During heating or in case of fire, toxic gases is possible.

##### Hazardous combustion products:

Nitrogen oxides (NOx), Carbon monoxide, Carbon dioxide (CO<sub>2</sub>)

During heating or in case of fire, toxic gases is possible.

#### \* 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. Avoid contact with skin, eyes and clothes.

###### Protective equipment:

Personal protection equipment: see section 8

###### Emergency procedures:

Remove persons to safety. Provide adequate ventilation.

##### 6.1.2. For emergency responders

###### 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.

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

##### For containment:

Suitable material for taking up: Sand, Kieselguhr, Universal binder, Chemical binding agents, containing acids

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



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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:**

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. Keep container tightly closed.

**Fire prevent measures:**

No special fire protection measures are necessary.

**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 only in original container. Keep container tightly closed in a cool, well-ventilated place.

**Requirements for storage rooms and vessels:**

No special measures are necessary. Shafts and sewers must be protected from entry of the product. Keep only in the original container in a cool, well-ventilated place.

**Hints on storage assembly:**

TRGS 510

**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:**

Keep away from heat. Protect from direct sunlight. Protect against: Frost

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<br>② Short-term occupational exposure limit value<br>③ Instantaneous value<br>④ Monitoring and observation processes<br>⑤ Remark |
|--------------------------------------|--|--|
| BE                                   | <b>2-(2-butoxyethoxy)ethanol</b><br>CAS No.: 112-34-5<br>EC No.: 203-961-6 | ① 10 ppm (67.5 mg/m <sup>3</sup> )<br>② 15 ppm (101.2 mg/m <sup>3</sup> )  |
| CZ<br>from 1 Mar 2020                | <b>2-(2-butoxyethoxy)ethanol</b><br>CAS No.: 112-34-5<br>EC No.: 203-961-6 | ① 10.36 ppm (70 mg/m <sup>3</sup> )<br>② 14.8 ppm (100 mg/m <sup>3</sup> )<br>⑤ I  |
| NO                                   | <b>2-(2-butoxyethoxy)ethanol</b><br>CAS No.: 112-34-5<br>EC No.: 203-961-6 | ① 10 ppm (68 mg/m <sup>3</sup> )<br>⑤ E  |
| IE<br>from 17 Jan 2020               | <b>2-(2-butoxyethoxy)ethanol</b><br>CAS No.: 112-34-5<br>EC No.: 203-961-6 | ① 10 ppm (67.5 mg/m <sup>3</sup> )<br>② 15 ppm (101.2 mg/m <sup>3</sup> )<br>⑤ IOELV   |



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| Limit value type<br>(country of origin) | Substance name   | ① Long-term occupational exposure limit value<br>② Short-term occupational exposure limit value<br>③ Instantaneous value<br>④ Monitoring and observation processes<br>⑤ Remark |
|---|--|--|
| HTP (FI)                                | <b>2-(2-butoxyethoxy)ethanol</b><br>CAS No.: 112-34-5<br>EC No.: 203-961-6 | ① 10 ppm (68 mg/m <sup>3</sup> )   |
| DK<br>from 28 Jun 2022                  | <b>2-(2-butoxyethoxy)ethanol</b><br>CAS No.: 112-34-5<br>EC No.: 203-961-6 | ① 10 ppm (68 mg/m <sup>3</sup> )<br>② 15 ppm (101 mg/m <sup>3</sup> )<br>⑤ E   |
| LT<br>from 21 Aug 2018                  | <b>2-(2-butoxyethoxy)ethanol</b><br>CAS No.: 112-34-5<br>EC No.: 203-961-6 | ① 10 ppm (67.5 mg/m <sup>3</sup> )<br>② 15 ppm (101.2 mg/m <sup>3</sup> )<br>⑤   |
| SE<br>from 1 Jun 2016                   | <b>2-(2-butoxyethoxy)ethanol</b><br>CAS No.: 112-34-5<br>EC No.: 203-961-6 | ① 10 ppm (68 mg/m <sup>3</sup> )<br>② 15 ppm (101 mg/m <sup>3</sup> )  |
| NPEL (SK)<br>from 23 Nov 2011           | <b>2-(2-butoxyethoxy)ethanol</b><br>CAS No.: 112-34-5<br>EC No.: 203-961-6 | ① 10 ppm (67.5 mg/m <sup>3</sup> )<br>② 15 ppm (101.2 mg/m <sup>3</sup> )  |
| WEL (GB)                                | <b>2-(2-butoxyethoxy)ethanol</b><br>CAS No.: 112-34-5<br>EC No.: 203-961-6 | ① 10 ppm (67.5 mg/m <sup>3</sup> )<br>② 15 ppm (101.2 mg/m <sup>3</sup> )  |
| VRI (FR)<br>from 3 May 2021             | <b>2-(2-butoxyethoxy)ethanol</b><br>CAS No.: 112-34-5<br>EC No.: 203-961-6 | ① 10 ppm (67.5 mg/m <sup>3</sup> )<br>② 15 ppm (101.2 mg/m <sup>3</sup> )  |
| MAK (AT)<br>from 11 Sept 2007           | <b>2-(2-butoxyethoxy)ethanol</b><br>CAS No.: 112-34-5<br>EC No.: 203-961-6 | ② 15 ppm (101.2 mg/m <sup>3</sup> )<br>⑤ (max. 4x15 min./Schicht)  |
| TRGS 900 (DE)<br>from 1 Mar 2011        | <b>2-(2-butoxyethoxy)ethanol</b><br>CAS No.: 112-34-5<br>EC No.: 203-961-6 | ① 10 ppm (67 mg/m <sup>3</sup> )<br>② 15 ppm (100.5 mg/m <sup>3</sup> )<br>⑤ (Aerosol und Dampf) EU, DFG, Y, 11  |
| HU                                      | <b>2-(2-butoxyethoxy)ethanol</b><br>CAS No.: 112-34-5<br>EC No.: 203-961-6 | ① 67.5 mg/m <sup>3</sup><br>② 101.2 mg/m <sup>3</sup><br>⑤ T   |
| BG<br>from 6 Jan 2012                   | <b>2-(2-butoxyethoxy)ethanol</b><br>CAS No.: 112-34-5<br>EC No.: 203-961-6 | ① 10 ppm (67.5 mg/m <sup>3</sup> )<br>② 15 ppm (101.2 mg/m <sup>3</sup> )  |
| HR                                      | <b>2-(2-butoxyethoxy)ethanol</b><br>CAS No.: 112-34-5<br>EC No.: 203-961-6 | ① 10 ppm (67.5 mg/m <sup>3</sup> )<br>② 15 ppm (101.2 mg/m <sup>3</sup> )  |
| EE                                      | <b>2-(2-butoxyethoxy)ethanol</b><br>CAS No.: 112-34-5<br>EC No.: 203-961-6 | ① 10 ppm (67.5 mg/m <sup>3</sup> )<br>⑤ (2-(2-butoksüetoksü)etanol)  |
| ES                                      | <b>2-(2-butoxyethoxy)ethanol</b><br>CAS No.: 112-34-5<br>EC No.: 203-961-6 | ① 10 ppm (67.5 mg/m <sup>3</sup> )<br>② 15 ppm (101.2 mg/m <sup>3</sup> )<br>⑤ VLI, r  |
| LV                                      | <b>2-(2-butoxyethoxy)ethanol</b><br>CAS No.: 112-34-5<br>EC No.: 203-961-6 | ① 10 ppm (67.5 mg/m <sup>3</sup> )<br>② 15 ppm (101.2 mg/m <sup>3</sup> )  |
| RO<br>from 21 Aug 2018                  | <b>2-(2-butoxyethoxy)ethanol</b><br>CAS No.: 112-34-5<br>EC No.: 203-961-6 | ① 10 ppm (67.5 mg/m <sup>3</sup> )<br>② 15 ppm (101.2 mg/m <sup>3</sup> )  |
| IOELV (EU)                              | <b>2-(2-butoxyethoxy)ethanol</b><br>CAS No.: 112-34-5<br>EC No.: 203-961-6 | ① 10 ppm (67.5 mg/m <sup>3</sup> )<br>② 15 ppm (101.2 mg/m <sup>3</sup> )  |
| SI<br>from 4 Dec 2018                   | <b>2-(2-butoxyethoxy)ethanol</b><br>CAS No.: 112-34-5<br>EC No.: 203-961-6 | ① 10 ppm (67.5 mg/m <sup>3</sup> )<br>② 15 ppm (101.2 mg/m <sup>3</sup> )<br>⑤ Y, EU2  |



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| Limit value type (country of origin) | Substance name   | ① Long-term occupational exposure limit value<br>② Short-term occupational exposure limit value<br>③ Instantaneous value<br>④ Monitoring and observation processes<br>⑤ Remark |
|--------------------------------------|--|--|
| IS                                   | <b>2-(2-butoxyethoxy)ethanol</b><br>CAS No.: 112-34-5<br>EC No.: 203-961-6 | ① 10 ppm (67.5 mg/m <sup>3</sup> )<br>② 15 ppm (101.2 mg/m <sup>3</sup> )  |
| CH<br>from 1 Jan 2022                | <b>2-(2-butoxyethoxy)ethanol</b><br>CAS No.: 112-34-5<br>EC No.: 203-961-6 | ① 10 ppm (67 mg/m <sup>3</sup> )<br>② 15 ppm (101 mg/m <sup>3</sup> )<br>⑤ (Dampf und Aerosol) SSC; Tox: Niere Blut Leber  |
| MAK (AT)<br>from 11 Sept 2007        | <b>2-(2-butoxyethoxy)ethanol</b><br>CAS No.: 112-34-5<br>EC No.: 203-961-6 | ① 10 ppm (67.5 mg/m <sup>3</sup> )   |
| GR<br>from 1 Oct 2016                | <b>2-(2-butoxyethoxy)ethanol</b><br>CAS No.: 112-34-5<br>EC No.: 203-961-6 | ① 10 ppm (67.5 mg/m <sup>3</sup> )<br>② 15 ppm (101.2 mg/m <sup>3</sup> )  |
| NL<br>from 1 Jan 2023                | <b>2-(2-butoxyethoxy)ethanol</b><br>CAS No.: 112-34-5<br>EC No.: 203-961-6 | ① 7.4 ppm (50 mg/m <sup>3</sup> )<br>② 14.8 ppm (100 mg/m <sup>3</sup> )<br>⑤ (kan door de huid in het lichaam worden opgenomen) H   |
| ACGIH (US)<br>from 1 Jan 2013        | <b>2-(2-butoxyethoxy)ethanol</b><br>CAS No.: 112-34-5<br>EC No.: 203-961-6 | ① 10 ppm (67.5 mg/m <sup>3</sup> )<br>⑤ (inhalable fraction and vapor)   |
| KR<br>from 20 Mar 2018               | <b>2-(2-butoxyethoxy)ethanol</b><br>CAS No.: 112-34-5<br>EC No.: 203-961-6 | ① 10 ppm   |
| TR                                   | <b>2-(2-butoxyethoxy)ethanol</b><br>CAS No.: 112-34-5<br>EC No.: 203-961-6 | ① 10 ppm (67.5 mg/m <sup>3</sup> )<br>② 15 ppm (101.2 mg/m <sup>3</sup> )  |
| PL                                   | <b>2-(2-butoxyethoxy)ethanol</b><br>CAS No.: 112-34-5<br>EC No.: 203-961-6 | ① 67 mg/m <sup>3</sup><br>② 100 mg/m <sup>3</sup>  |
| RU                                   | <b>2-(2-butoxyethoxy)ethanol</b><br>CAS No.: 112-34-5<br>EC No.: 203-961-6 | ③ 10 mg/m <sup>3</sup>   |

**8.1.2. Biological limit values**

No data available

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

| Substance name   | DNEL value              | ① DNEL type<br>② Exposure route                             |
|--|-------------------------|---|
| <b>Isotridecanol, ethoxylated</b><br>CAS No.: 69011-36-5<br>EC No.: 500-241-6  | 294 mg/m <sup>3</sup>   | ① DNEL worker<br>② Long-term - inhalation, systemic effects |
| <b>tetrapotassium pyrophosphate</b><br>CAS No.: 7320-34-5<br>EC No.: 230-785-7 | 2.79 mg/m <sup>3</sup>  | ① DNEL worker<br>② Long-term - inhalation, systemic effects |
| <b>2-(2-butoxyethoxy)ethanol</b><br>CAS No.: 112-34-5<br>EC No.: 203-961-6     | 67.5 mg/m <sup>3</sup>  | ① DNEL worker<br>② Long-term - inhalation, systemic effects |
| <b>2-(2-butoxyethoxy)ethanol</b><br>CAS No.: 112-34-5<br>EC No.: 203-961-6     | 67.5 mg/m <sup>3</sup>  | ① DNEL worker<br>② Long-term - inhalation, local effects    |
| <b>2-(2-butoxyethoxy)ethanol</b><br>CAS No.: 112-34-5<br>EC No.: 203-961-6     | 101.2 mg/m <sup>3</sup> | ① DNEL worker<br>② Acute - inhalation, local effects        |



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| Substance name   | DNEL value          | ① DNEL type<br>② Exposure route                         |
|--|---------------------|---|
| <b>2-(2-butoxyethoxy)ethanol</b><br>CAS No.: 112-34-5<br>EC No.: 203-961-6 | 20 mg/kg bw/<br>day | ① DNEL worker<br>② Long-term - dermal, systemic effects |

| Substance name   | PNEC Value           | ① PNEC type                   |
|--|----------------------|-------------------------------|
| <b>tetrapotassium pyrophosphate</b><br>CAS No.: 7320-34-5<br>EC No.: 230-785-7 | 0.05 mg/L            | ① PNEC aquatic, freshwater    |
| <b>tetrapotassium pyrophosphate</b><br>CAS No.: 7320-34-5<br>EC No.: 230-785-7 | 0.005 mg/L           | ① PNEC aquatic, marine water  |
| <b>2-(2-butoxyethoxy)ethanol</b><br>CAS No.: 112-34-5<br>EC No.: 203-961-6     | 1 mg/L               | ① PNEC aquatic, freshwater    |
| <b>2-(2-butoxyethoxy)ethanol</b><br>CAS No.: 112-34-5<br>EC No.: 203-961-6     | 0.1 mg/L             | ① PNEC aquatic, marine water  |
| <b>2-(2-butoxyethoxy)ethanol</b><br>CAS No.: 112-34-5<br>EC No.: 203-961-6     | 200 mg/L             | ① PNEC sewage treatment plant |
| <b>2-(2-butoxyethoxy)ethanol</b><br>CAS No.: 112-34-5<br>EC No.: 203-961-6     | 4 mg/kg bw/<br>day   | ① PNEC sediment, freshwater   |
| <b>2-(2-butoxyethoxy)ethanol</b><br>CAS No.: 112-34-5<br>EC No.: 203-961-6     | 0.4 mg/kg bw/<br>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  
DIN-/EN-Norms EN 166

#### Skin protection:

Hand protection

Suitable material: NBR (Nitrile rubber), PVC (polyvinyl chloride)

Thickness of the glove material:  $\geq 0,4$  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 respiratory protection necessary.

### 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:** colourless

**Odour:** Lemon



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**Safety relevant basis data**

| Parameter                                    | Value                   | at °C | ① Method<br>② Remark |
|--|-------------------------|-------|----------------------|
| pH   | 11                      | 20 °C |                      |
| Melting point                                | <i>not determined</i>   |       |                      |
| Freezing point                               | <i>not determined</i>   |       |                      |
| Initial boiling point and boiling range      | 100 °C                  |       |                      |
| Decomposition temperature                    | <i>not determined</i>   |       |                      |
| Flash point                                  | <i>not applicable</i>   |       |                      |
| Evaporation rate                             | <i>not determined</i>   |       |                      |
| Auto-ignition temperature                    | <i>not determined</i>   |       |                      |
| Upper/lower flammability or explosive limits | <i>not determined</i>   |       |                      |
| Vapour pressure                              | <i>not determined</i>   |       |                      |
| Vapour density                               | <i>not determined</i>   |       |                      |
| Density                                      | 1,055 kg/m <sup>3</sup> | 20 °C |                      |
| Relative density                             | <i>not determined</i>   |       |                      |
| Bulk density                                 | <i>not determined</i>   |       |                      |
| Water solubility                             | completely miscible     |       |                      |
| Partition coefficient: n-octanol/water       | <i>not determined</i>   |       |                      |
| Dynamic viscosity                            | <i>not determined</i>   |       |                      |
| Kinematic viscosity                          | <i>not determined</i>   |       |                      |

**9.2. Other information**

No data available

**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 hazardous reaction when handled and stored according to provisions.

**10.4. Conditions to avoid**

No special measures are necessary.

\* **10.5. Incompatible materials**

Oxidising agent, strong

\* **10.6. Hazardous decomposition products**

No known hazardous decomposition products.

**Further information**

No information available.

**SECTION 11: Toxicological information**

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

|   |
|---|
| <b>Isotridecanol, ethoxylated</b> CAS No.: 69011-36-5 EC No.: 500-241-6       |
| <b>LD<sub>50</sub> oral:</b> 500 mg/kg  |
| <b>LD<sub>50</sub> dermal:</b> >2,000 mg/kg (Rabbit)                          |
| <b>tetrapotassium pyrophosphate</b> CAS No.: 7320-34-5 EC No.: 230-785-7      |
| <b>LD<sub>50</sub> oral:</b> 2,440 mg/kg (Rat)                                |
| <b>LD<sub>50</sub> dermal:</b> >2,000 mg/kg                                   |
| <b>LC<sub>50</sub> Acute inhalation toxicity (dust/mist):</b> >1.1 mg/L (Rat) |



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|   |                     |                   |
|---|---------------------|-------------------|
| <b>2-(2-butoxyethoxy)ethanol</b>  | CAS No.: 112-34-5   | EC No.: 203-961-6 |
| <b>LD<sub>50</sub> oral:</b> 5,660 mg/kg (Rat)  |                     |                   |
| <b>LD<sub>50</sub> dermal:</b> 4,000 mg/kg (Rabbit)   |                     |                   |
| <b>sodium cumenesulphonate</b>  | CAS No.: 28348-53-0 | EC No.: 248-983-7 |
| <b>LD<sub>50</sub> oral:</b> >7,000 mg/kg (Rat)   |                     |                   |
| <b>LD<sub>50</sub> dermal:</b> >2,000 mg/kg (rabbit) OECD Guideline 402 (Acute Dermal Toxicity)   |                     |                   |
| <b>LC<sub>50</sub> Acute inhalation toxicity (dust/mist):</b> >770 mg/L 4 h (rat) CPSC CFR1500.40 of the Federal Hazardous Substances Act |                     |                   |

**Acute oral toxicity:**

ATEmix: 5005 mg/kg.

**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:**

Causes serious eye damage.

**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:**

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

**Aspiration hazard:**

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

**Additional information:**

Frequently or prolonged contact with skin may cause dermal irritation.

\* **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**

|   |                     |                   |
|---|---------------------|-------------------|
| <b>Isotridecanol, ethoxylated</b>   | CAS No.: 69011-36-5 | EC No.: 500-241-6 |
| <b>LC<sub>50</sub>:</b> 1 - 10 mg/L 4 d (fish, Cyprinus carpio (Common Carp))       |                     |                   |
| <b>EC<sub>50</sub>:</b> 1 - 10 mg/L 2 d (fish, Daphnia magna)                       |                     |                   |
| <b>EC<sub>50</sub>:</b> 1 - 10 mg/L 2 d (crustaceans, Daphnia magna)                |                     |                   |
| <b>ErC<sub>50</sub>:</b> 1 - 10 mg/L 3 d (Algae/water plant)                        |                     |                   |
| <b>tetrapotassium pyrophosphate</b>   | CAS No.: 7320-34-5  | EC No.: 230-785-7 |
| <b>LC<sub>50</sub>:</b> >100 mg/L 4 d (fish, Oncorhynchus mykiss (Rainbow trout))   |                     |                   |
| <b>EC<sub>50</sub>:</b> >100 mg/L 2 d (crustaceans, Daphnia magna (Big water flea)) |                     |                   |
| <b>EC<sub>50</sub>:</b> >100 mg/L 3 d (Algae/water plant, Desmodemus subspicatus)   |                     |                   |



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|   |
|---|
| <b>2-(2-butoxyethoxy)ethanol</b> CAS No.: 112-34-5 EC No.: 203-961-6  |
| <b>LC<sub>50</sub></b> : 1,300 mg/L 4 d (fish, <i>Lepomis macrochirus</i> (Bluegill))   |
| <b>EC<sub>50</sub></b> : >100 mg/L 2 d (crustaceans, <i>Daphnia magna</i> (Big water flea))   |
| <b>NOEC</b> : 1,000 mg/L (Algae/water plant, <i>Scenedesmus quadricauda</i> )   |
| <b>ErC<sub>50</sub></b> : 1,101 mg/L 3 d (Algae/water plant)  |
| <b>sodium cumenesulphonate</b> CAS No.: 28348-53-0 EC No.: 248-983-7  |
| <b>LC<sub>50</sub></b> : >450 mg/L 4 d (fish, <i>Pimephales promelas</i> ) EPA OTS 797.1400 (Fish Acute Toxicity Test)  |
| <b>EC<sub>50</sub></b> : 230 mg/L 4 d (Algae/water plant, <i>Pseudokirchneriella subcapitata</i> (previous names: <i>Raphidocelis subcapitata</i> , <i>Selenastrum capricornutum</i> )) EPA OTS 797.1050 (Algal Toxicity, Tiers I and II) |
| <b>EC<sub>50</sub></b> : >450 mg/L 2 d (crustaceans, <i>Daphnia magna</i> ) EPA OTS 797.1300 (Aquatic Invertebrate Acute Toxicity Test, Freshwater Daphnids)  |
| <b>NOEC</b> : 31 mg/L 4 d (Algae/water plant, <i>Pseudokirchneriella subcapitata</i> (previous names: <i>Raphidocelis subcapitata</i> , <i>Selenastrum capricornutum</i> )) EPA OTS 797.1050 (Algal Toxicity, Tiers I and II)             |
| <b>NOEC</b> : 560 mg/L 4 d (fish, <i>Pimephales promelas</i> ) EPA OTS 797.1400 (Fish Acute Toxicity Test)  |

**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>Isotridecanol, ethoxylated</b> CAS No.: 69011-36-5 EC No.: 500-241-6 |
| <b>Biodegradation:</b> Yes, rapidly                                     |
| <b>2-(2-butoxyethoxy)ethanol</b> CAS No.: 112-34-5 EC No.: 203-961-6    |
| <b>Biodegradation:</b> Yes, rapidly                                     |

**Additional information:**

The product has not been tested.

\* **12.3. Bioaccumulative potential**

|  |
|--|
| <b>Isotridecanol, ethoxylated</b> CAS No.: 69011-36-5 EC No.: 500-241-6  |
| <b>Log K<sub>OW</sub></b> : 4.73   |
| <b>2-(2-butoxyethoxy)ethanol</b> CAS No.: 112-34-5 EC No.: 203-961-6     |
| <b>Log K<sub>OW</sub></b> : 0.56   |
| <b>sodium cumenesulphonate</b> CAS No.: 28348-53-0 EC No.: 248-983-7     |
| <b>Log K<sub>OW</sub></b> : 1.5  |
| <b>Bioconcentration factor (BCF):</b> < 2.3 Species: <i>Cyprinus sp.</i> |

**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>Isotridecanol, ethoxylated</b> CAS No.: 69011-36-5 EC No.: 500-241-6   |
| <b>Results of PBT and vPvB assessment:</b> This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII. |
| <b>tetrapotassium pyrophosphate</b> CAS No.: 7320-34-5 EC No.: 230-785-7  |
| <b>Results of PBT and vPvB assessment:</b> This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII. |
| <b>2-(2-butoxyethoxy)ethanol</b> CAS No.: 112-34-5 EC No.: 203-961-6  |
| <b>Results of PBT and vPvB assessment:</b> This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII. |
| <b>sodium cumenesulphonate</b> CAS No.: 28348-53-0 EC No.: 248-983-7  |
| <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.



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**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 4 | Irritant — skin irritation and eye damage |
|------|---|

**Waste treatment options**

**Appropriate disposal / Product:**  
 Dispose of waste according to applicable legislation.

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

**Other disposal recommendations:**  
 Consult the appropriate local waste disposal expert about waste disposal.

**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   |
| <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**  
 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**

**Restrictions on use:**  
 Use restriction according to REACH annex XVII, no.: 3, 55

**Other regulations (EU):**  
 Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances [Seveso-III-Directive]: This product is not assigned to a hazard category.  
 Labelling for contents according to regulation (EC) No. 648/2004 non-ionic surfactants, phosphates 5- <15%, perfumes <5%



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**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. 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

TRGS 900

**Berufsgenossenschaftliche Vorschriften (DGUV-Vorschriften)**

Berufsgenossenschaftliche Informationen (DGUV-Informationen) 868

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

 **[CH] National regulations****Other regulations, restrictions and prohibition regulations**

Mengenschwelle (Schweiz - StFV)

Gefahrencode

Brandverhütung, BVD (Schweiz)

Störfallverordnung (StFV)

**15.2. Chemical Safety Assessment**

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

\* **15.3. Additional information**

No data available

**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                |
| 4.3. | Indication of any immediate medical attention and special treatment needed |
| 5.1. | Extinguishing media  |
| 5.2. | Special hazards arising from the substance or mixture                      |
| 5.4. | Additional information   |
| 6.1. | Personal precautions, protective equipment and emergency procedures        |
| 6.2. | Environmental precautions  |
| 6.3. | Methods and material for containment and cleaning up                       |
| 7.1. | Precautions for safe handling  |
| 7.2. | Conditions for safe storage, including any incompatibilities               |
| 7.3. | Specific end use(s)  |
| 8.1. | Control parameters   |



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|       |  |
|-------|--|
| 8.2.  | Exposure controls  |
| 9.1.  | Information on basic physical and chemical properties  |
| 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   |
| 12.6. | Endocrine disrupting properties  |
| 12.7. | Other adverse effects  |
| 13.1. | Waste treatment methods  |
| 14.7. | Maritime transport in bulk according to IMO instruments  |
| 15.1. | Safety, health and environmental regulations/legislation specific for the substance or mixture         |
| 15.3. | Additional information   |
| 16.1. | Indication of changes  |
| 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] |

## 16.2. Abbreviations and acronyms

For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

See overview table at [www.euphrac.eu](http://www.euphrac.eu)

## \* 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  |
|---|---|---|
| sodium cumenesulphonate<br>CAS No.: 28348-53-0<br>EC No.: 248-983-7 | LD <sub>50</sub> dermal; LC <sub>50</sub> Acute<br>inhalation toxicity (dust/mist);<br>LC <sub>50</sub> ; EC <sub>50</sub> ; NOEC | Source: European Chemicals Agency,<br><a href="http://echa.europa.eu/">http://echa.europa.eu/</a> |

## \* 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 |
|---|----------------------------------|--------------------------|
| Serious eye damage/eye irritation<br>(Eye Dam. 1) | H318: Causes serious eye damage. | Calculation method.      |

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

| Hazard statements |                                |
|-------------------|--------------------------------|
| H302              | Harmful if swallowed.          |
| H318              | Causes serious eye damage.     |
| H319              | Causes serious eye irritation. |

## 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



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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.