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Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
Revision date / version: 12.07.2019 / 0011  
Replacing version dated / version: 22.02.2019 / 0010  
Valid from: 12.07.2019  
PDF print date: 17.02.2020  
Glas-Reiniger 10 L  
Art.: 8194

## Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

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

#### 1.1 Product identifier

**Glas-Reiniger 10 L**  
**Art.: 8194**

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

**Relevant identified uses of the substance or mixture:**

Cleaner

Sector of use [SU]:

SU 3 - Industrial uses: Uses of substances as such or in preparations at industrial sites

SU21 - Consumer uses: Private households (=general public = consumers)

SU22 - Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Chemical product category [PC]:

PC35 - Washing and cleaning products

Process category [PROC]:

PROC 7 - Industrial spraying

PROC 9 - Transfer of substance or mixture into small containers (dedicated filling line, including weighing)

PROC10 - Roller application or brushing

PROC11 - Non industrial spraying

PROC19 - Manual activities involving hand contact

Article Categories [AC]:

AC99 - Not required.

Environmental Release Category [ERC]:

ERC 4 - Use of non-reactive processing aid at industrial site (no inclusion into or onto article)

ERC 8a - Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)

ERC 8d - Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)

#### **Uses advised against:**

No information available at present.

#### 1.3 Details of the supplier of the safety data sheet

LIQUI MOLY GmbH

Jerg-Wieland-Str. 4

89081 Ulm-Lehr

Tel.: (+49) 0731-1420-0

Fax: (+49) 0731-1420-88

Qualified person's e-mail address: [info@chemical-check.de](mailto:info@chemical-check.de), [k.schnurbusch@chemical-check.de](mailto:k.schnurbusch@chemical-check.de) Please DO NOT use for requesting Safety Data Sheets.

#### 1.4 Emergency telephone number

#### **Emergency information services / official advisory body:**

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#### **Telephone number of the company in case of emergencies:**

+49 (0) 700 / 24 112 112 (LMR)

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

**Classification according to Regulation (EC) 1272/2008 (CLP)**

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| Hazard class | Hazard category | Hazard statement                        |
|--------------|-----------------|---|
| Flam. Liq.   | 3               | H226-Flammable liquid and vapour.       |
| Eye Irrit.   | 2               | H319-Causes serious eye irritation.     |
| STOT SE      | 3               | H336-May cause drowsiness or dizziness. |

## 2.2 Label elements

### Labeling according to Regulation (EC) 1272/2008 (CLP)



Warning

H226-Flammable liquid and vapour. H319-Causes serious eye irritation. H336-May cause drowsiness or dizziness.

P101-If medical advice is needed, have product container or label at hand. P102-Keep out of reach of children.  
 P210-Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P261-Avoid breathing vapours or spray. P271-Use only outdoors or in a well-ventilated area. P280-Wear eye protection.  
 P312-Call a POISON CENTRE / doctor if you feel unwell.  
 P405-Store locked up.  
 P501-Dispose of contents / container to an approved waste disposal facility.

Propan-2-ol

## 2.3 Other hazards

The mixture does not contain any vPvB substance (vPvB = very persistent, very bioaccumulative) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).

The mixture does not contain any PBT substance (PBT = persistent, bioaccumulative, toxic) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).

When using: development of flammable vapour/air mixture possible.

## SECTION 3: Composition/information on ingredients

### 3.1 Substance

n.a.

### 3.2 Mixture

|  |  |
|--|--|
| <b>Propan-2-ol</b>   |  |
| <b>Registration number (REACH)</b>                                 | ---  |
| <b>Index</b>   | 603-117-00-0   |
| <b>EINECS, ELINCS, NLP</b>   | 200-661-7  |
| <b>CAS</b>   | 67-63-0  |
| <b>content %</b>   | 20-50  |
| <b>Classification according to Regulation (EC) 1272/2008 (CLP)</b> | Flam. Liq. 2, H225<br>Eye Irrit. 2, H319<br>STOT SE 3, H336    |
| <b>2-butoxyethanol</b>   | <b>Substance for which an EU exposure limit value applies.</b> |
| <b>Registration number (REACH)</b>                                 | ---  |

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|  |   |
|--|---|
| <b>Index</b>   | 603-014-00-0  |
| <b>EINECS, ELINCS, NLP</b>   | 203-905-0   |
| <b>CAS</b>   | 111-76-2  |
| <b>content %</b>   | 1-<10   |
| <b>Classification according to Regulation (EC) 1272/2008 (CLP)</b> | Acute Tox. 4, H302<br>Eye Irrit. 2, H319<br>Skin Irrit. 2, H315<br>Acute Tox. 4, H312<br>Acute Tox. 4, H332 |

For the text of the H-phrases and classification codes (GHS/CLP), see Section 16.  
 The substances named in this section are given with their actual, appropriate classification!  
 For substances that are listed in appendix VI, table 3.1 of the regulation (EC) no. 1272/2008 (CLP regulation) this means that all notes that may be given here for the named classification have been taken into account.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

First-aiders should ensure they are protected!  
 Never pour anything into the mouth of an unconscious person!

#### Inhalation

Remove person from danger area.  
 Supply person with fresh air and consult doctor according to symptoms.  
 If the person is unconscious, place in a stable side position and consult a doctor.

#### Skin contact

Wash thoroughly using copious water - remove contaminated clothing immediately. If skin irritation occurs (redness etc.), consult doctor.

#### Eye contact

Wash thoroughly for several minutes using copious water. Seek medical help if necessary.

#### Ingestion

Rinse the mouth thoroughly with water.  
 Do not induce vomiting - give copious water to drink. Consult doctor immediately.  
 Danger of aspiration.

### 4.2 Most important symptoms and effects, both acute and delayed

If applicable delayed symptoms and effects can be found in section 11 and the absorption route in section 4.1.  
 In certain cases, the symptoms of poisoning may only appear after an extended period / after several hours.

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

n.c.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

CO2  
 Extinction powder  
 Water jet spray  
 Alcohol resistant foam

#### Unsuitable extinguishing media

High volume water jet

### 5.2 Special hazards arising from the substance or mixture

In case of fire the following can develop:  
 Oxides of carbon  
 Oxides of nitrogen  
 Toxic pyrolysis products.  
 Explosive vapour/air or gas/air mixtures.  
 Dangerous vapours heavier than air.  
 In case of spreading near the ground, flashback to distance sources of ignition is possible.

### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes.

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Protective respirator with independent air supply.  
 Cool container at risk with water.  
 Dispose of contaminated extinction water according to official regulations.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Ensure sufficient supply of air.  
 Remove possible causes of ignition - do not smoke.  
 Avoid contact with eyes or skin.  
 If applicable, caution - risk of slipping.

### 6.2 Environmental precautions

If leakage occurs, dam up.  
 Resolve leaks if this possible without risk.  
 Prevent surface and ground-water infiltration, as well as ground penetration.  
 Prevent from entering drainage system.

### 6.3 Methods and material for containment and cleaning up

Soak up with absorbent material (e.g. universal binding agent, sand, diatomaceous earth) and dispose of according to Section 13.

### 6.4 Reference to other sections

For personal protective equipment see Section 8 and for disposal instructions see Section 13.

## SECTION 7: Handling and storage

In addition to information given in this section, relevant information can also be found in section 8 and 6.1.

### 7.1 Precautions for safe handling

#### 7.1.1 General recommendations

Ensure good ventilation.  
 Room ventilation also at ground level.  
 Keep away from sources of ignition - Do not smoke.  
 Take measures against electrostatic charging, if appropriate.  
 Avoid contact with eyes or skin.  
 Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.  
 Observe directions on label and instructions for use.  
 Use working methods according to operating instructions.

#### 7.1.2 Notes on general hygiene measures at the workplace

General hygiene measures for the handling of chemicals are applicable.  
 Wash hands before breaks and at end of work.  
 Keep away from food, drink and animal feedingstuffs.  
 Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

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

Keep out of access to unauthorised individuals.  
 Not to be stored in gangways or stair wells.  
 Store product closed and only in original packing.  
 Solvent resistant floor  
 Do not store with oxidizing agents.  
 Observe special storage conditions.  
 Protect from direct sunlight and warming.  
 Store in a well ventilated place.

### 7.3 Specific end use(s)

No information available at present.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

| GB | Chemical Name                             | Propan-2-ol                                 | Content %:20-50 |
|----|---|---|-----------------|
|    | WEL-TWA: 400 ppm (999 mg/m <sup>3</sup> ) | WEL-STEL: 500 ppm (1250 mg/m <sup>3</sup> ) | ---             |

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|                        |   |
|------------------------|---|
| Monitoring procedures: | <ul style="list-style-type: none"> <li>- Compur - KITA-122 SA(C) (549 277)</li> <li>- Compur - KITA-150 U (550 382)</li> <li>- Draeger - Alcohol 25/a i-Propanol (81 01 631)</li> <li>- DFG (D) (Loesungsmittelgemische), DFG (E) (Solvent mixtures 6) - 1998, 2002 - EU project BC/CEN/ENTR/000/2002-16 card 66-3 (2004)</li> <li>- Draeger - Alcohol 100/a (CH 29 701)</li> </ul> |
| BMGV: ---              | Other information: ---  |

| Chemical Name   | 2-butoxyethanol   |     | Content %:1-<10 |
|---|---|-----|-----------------|
| WEL-TWA: 25 ppm (123 mg/m3) (WEL), 20 ppm (98 mg/m3) (EU)                   | WEL-STEL: 50 ppm (246 mg/m3) (WEL, EU)  | --- |                 |
| Monitoring procedures:  | <ul style="list-style-type: none"> <li>- Compur - KITA-190 U(C) (548 873)</li> <li>- DFG (D) (Loesungsmittelgemische 3), DFG (E) (Solvent mixtures 3) - 1998, 2002 - EU project BC/CEN/ENTR/000/2002-16 card 32-2 (2004)</li> </ul> |     |                 |
| BMGV: 240 mmol butoxyacetic acid/mol creatinine in urine, post shift (BMGV) | Other information: Sk (WEL)   |     |                 |

| Propan-2-ol         |  |                  |            |       |            |       |
|---------------------|--|------------------|------------|-------|------------|-------|
| Area of application | Exposure route / Environmental compartment           | Effect on health | Descriptor | Value | Unit       | Note  |
|                     | Environment - freshwater                             |                  | PNEC       | 140,9 | mg/l       |       |
|                     | Environment - marine                                 |                  | PNEC       | 140,9 | mg/l       |       |
|                     | Environment - sediment, freshwater                   |                  | PNEC       | 552   | mg/kg      |       |
|                     | Environment - sediment, marine                       |                  | PNEC       | 552   | mg/kg      |       |
|                     | Environment - soil                                   |                  | PNEC       | 28    | mg/kg      |       |
|                     | Environment - sewage treatment plant                 |                  | PNEC       | 2251  | mg/l       |       |
|                     | Environment - water, sporadic (intermittent) release |                  | PNEC       | 140,9 | mg/l       |       |
|                     | Environment - oral (animal feed)                     |                  | PNEC       | 160   | mg/kg feed |       |
| Consumer            | Human - dermal                                       | Long term        | DNEL       | 319   | mg/kg      | (1 d) |
| Consumer            | Human - inhalation                                   | Long term        | DNEL       | 89    | mg/m3      |       |
| Consumer            | Human - oral   | Long term        | DNEL       | 26    | mg/kg      | (1 d) |
| Workers / employees | Human - dermal                                       | Long term        | DNEL       | 888   | mg/kg      | (1 d) |
| Workers / employees | Human - inhalation                                   | Long term        | DNEL       | 500   | mg/m3      |       |

| 2-butoxyethanol     |   |                              |            |       |            |      |
|---------------------|---|------------------------------|------------|-------|------------|------|
| Area of application | Exposure route / Environmental compartment    | Effect on health             | Descriptor | Value | Unit       | Note |
|                     | Environment - freshwater                      |                              | PNEC       | 8,8   | mg/l       |      |
|                     | Environment - marine                          |                              | PNEC       | 0,88  | mg/l       |      |
|                     | Environment - sediment, freshwater            |                              | PNEC       | 34,6  | mg/kg dw   |      |
|                     | Environment - soil                            |                              | PNEC       | 2,8   | mg/kg dw   |      |
|                     | Environment - sewage treatment plant          |                              | PNEC       | 463   | mg/l       |      |
|                     | Environment - sediment, marine                |                              | PNEC       | 3,46  | mg/kg dw   |      |
|                     | Environment - sporadic (intermittent) release |                              | PNEC       | 9,1   | mg/l       |      |
|                     | Environment - soil                            |                              | PNEC       | 2,33  | mg/kg      |      |
|                     | Environment - oral (animal feed)              |                              | PNEC       | 20    | mg/kg      |      |
| Consumer            | Human - inhalation                            | Long term, local effects     | DNEL       | 147   | mg/m3      |      |
| Consumer            | Human - dermal                                | Short term, systemic effects | DNEL       | 44,5  | mg/kg bw/d |      |

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|                     |                    |                              |      |      |                   |  |
|---------------------|--------------------|------------------------------|------|------|-------------------|--|
| Consumer            | Human - inhalation | Short term, systemic effects | DNEL | 426  | mg/m <sup>3</sup> |  |
| Consumer            | Human - oral       | Short term, systemic effects | DNEL | 13,4 | mg/kg bw/d        |  |
| Consumer            | Human - inhalation | Short term, local effects    | DNEL | 123  | mg/m <sup>3</sup> |  |
| Consumer            | Human - dermal     | Long term, systemic effects  | DNEL | 38   | mg/kg bw/d        |  |
| Consumer            | Human - inhalation | Long term, systemic effects  | DNEL | 49   | mg/m <sup>3</sup> |  |
| Consumer            | Human - oral       | Long term, systemic effects  | DNEL | 3,2  | mg/kg bw/d        |  |
| Workers / employees | Human - dermal     | Short term, systemic effects | DNEL | 89   | mg/kg bw/d        |  |
| Workers / employees | Human - inhalation | Short term, systemic effects | DNEL | 663  | mg/m <sup>3</sup> |  |
| Workers / employees | Human - inhalation | Short term, local effects    | DNEL | 246  | mg/m <sup>3</sup> |  |
| Workers / employees | Human - dermal     | Long term, systemic effects  | DNEL | 75   | mg/kg bw/d        |  |
| Workers / employees | Human - inhalation | Long term, systemic effects  | DNEL | 98   | mg/m <sup>3</sup> |  |

WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period) EH40. AGW = "Arbeitsplatzgrenzwert" (workplace limit value, Germany).  
 (8) = Inhalable fraction (2017/164/EU, 2017/2398/EU). (9) = Respirable fraction (2017/164/EU, 2017/2398/EU). | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period).  
 (8) = Inhalable fraction (2017/164/EU, 2017/2398/EU). (9) = Respirable fraction (2017/164/EU, 2017/2398/EU). (10) = Short-term exposure limit value in relation to a reference period of 1 minute (2017/164/EU). | BMGV = Biological monitoring guidance value EH40. BGW = "Biologischer Grenzwert" (biological limit value, Germany) | Other information: Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage.  
 \*\* = The exposure limit for this substance is repealed through the TRGS 900 (Germany) of January 2006 with the goal of revision.

## 8.2 Exposure controls

### 8.2.1 Appropriate engineering controls

Ensure good ventilation. This can be achieved by local suction or general air extraction.  
 If this is insufficient to maintain the concentration under the WEL or AGW values, suitable breathing protection should be worn.  
 Applies only if maximum permissible exposure values are listed here.  
 Suitable assessment methods for reviewing the effectiveness of protection measures adopted include metrological and non-metrological investigative techniques.  
 These are specified by e.g. BS EN 14042.  
 BS EN 14042 "Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents".

### 8.2.2 Individual protection measures, such as personal protective equipment

General hygiene measures for the handling of chemicals are applicable.  
 Wash hands before breaks and at end of work.  
 Keep away from food, drink and animal feedingstuffs.  
 Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

Eye/face protection:  
 Tight fitting protective goggles with side protection (EN 166).

Skin protection - Hand protection:  
 Chemical resistant protective gloves (EN 374).  
 Recommended  
 Protective gloves in butyl rubber (EN 374).  
 Minimum layer thickness in mm:

0,5  
 Permeation time (penetration time) in minutes:  
 >480

The breakthrough times determined in accordance with EN 16523-1 were not obtained under practical conditions.

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Incorporate a recovery phase for regeneration of the skin.  
 Protective hand cream recommended.  
 The recommended maximum wearing time is 50% of breakthrough time.

Skin protection - Other:  
 Protective working garments (e.g. safety shoes EN ISO 20345, long-sleeved protective working garments).

Respiratory protection:  
 If OES or MEL is exceeded.  
 Gas mask filter A (EN 14387), code colour brown  
 Observe wearing time limitations for respiratory protection equipment.

Thermal hazards:  
 If applicable, these are included in the individual protective measures (eye/face protection, skin protection, respiratory protection).

Additional information on hand protection - No tests have been performed.  
 In the case of mixtures, the selection has been made according to the knowledge available and the information about the contents.  
 Selection of materials derived from glove manufacturer's indications.  
 Final selection of glove material must be made taking the breakthrough times, permeation rates and degradation into account.  
 Selection of a suitable glove depends not only on the material but also on other quality characteristics and varies from manufacturer to manufacturer.  
 In the case of mixtures, the resistance of glove materials cannot be predicted and must therefore be tested before use.  
 The exact breakthrough time of the glove material can be requested from the protective glove manufacturer and must be observed.

### 8.2.3 Environmental exposure controls

No information available at present.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

|  |  |
|--|--|
| Physical state:                          | Liquid   |
| Colour:                                  | Blue   |
| Odour:                                   | Characteristic   |
| Odour threshold:                         | Not determined   |
| pH-value:                                | 9,5-10   |
| Melting point/freezing point:            | Not determined   |
| Initial boiling point and boiling range: | 88-100 °C  |
| Flash point:                             | >23- <34 °C  |
| Evaporation rate:                        | Not determined   |
| Flammability (solid, gas):               | Not determined   |
| Lower explosive limit:                   | 1 Vol-%  |
| Upper explosive limit:                   | 12 Vol-%   |
| Vapour pressure:                         | <110 kPa (50°C)  |
| Vapour density (air = 1):                | Not determined   |
| Density:                                 | 0,95 g/ml (20°C)   |
| Bulk density:                            | Not determined   |
| Solubility(ies):                         | Not determined   |
| Water solubility:                        | Mixable  |
| Partition coefficient (n-octanol/water): | Not determined   |
| Auto-ignition temperature:               | >400 °C  |
| Decomposition temperature:               | Not determined   |
| Viscosity:                               | 1,8 mPas (20°C)  |
| Explosive properties:                    | Possible build up of explosive/highly flammable vapour/air mixture.<br>Product is not explosive. |
| Oxidising properties:                    | No   |

### 9.2 Other information

|                           |                |
|---------------------------|----------------|
| Miscibility:              | Not determined |
| Fat solubility / solvent: | Not determined |
| Conductivity:             | Not determined |
| Surface tension:          | Not determined |
| Solvents content:         | Not determined |

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

See also Subsection 10.2 to 10.6.  
 The product has not been tested.

### 10.2 Chemical stability

See also Subsection 10.1 to 10.6.  
 Stable with proper storage and handling.

### 10.3 Possibility of hazardous reactions

See also Subsection 10.1 to 10.6.  
 No decomposition if used as intended.

### 10.4 Conditions to avoid

See also section 7.  
 Heating, open flame, ignition sources

### 10.5 Incompatible materials

See also section 7.  
 Avoid contact with strong oxidizing agents.

### 10.6 Hazardous decomposition products

See also Subsection 10.1 to 10.5.  
 See also section 5.2  
 No decomposition when used as directed.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Possibly more information on health effects, see Section 2.1 (classification).

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| Toxicity / effect   | Endpoint | Value | Unit    | Organism | Test method | Notes                        |
| Acute toxicity, by oral route:                                | ATE      | >2000 | mg/kg   |          |             | calculated value             |
| Acute toxicity, by dermal route:                              | ATE      | >2000 | mg/kg   |          |             | calculated value             |
| Acute toxicity, by inhalation:                                | ATE      | >20   | mg/l/4h |          |             | calculated value,<br>Vapours |
| Acute toxicity, by inhalation:                                | ATE      | >5    | mg/l/4h |          |             | calculated value,<br>Aerosol |
| Skin corrosion/irritation:                                    |          |       |         |          |             | n.d.a.                       |
| Serious eye damage/irritation:                                |          |       |         |          |             | n.d.a.                       |
| Respiratory or skin sensitisation:                            |          |       |         |          |             | n.d.a.                       |
| Germ cell mutagenicity:                                       |          |       |         |          |             | n.d.a.                       |
| Carcinogenicity:  |          |       |         |          |             | n.d.a.                       |
| Reproductive toxicity:  |          |       |         |          |             | n.d.a.                       |
| Specific target organ toxicity - single exposure (STOT-SE):   |          |       |         |          |             | n.d.a.                       |
| Specific target organ toxicity - repeated exposure (STOT-RE): |          |       |         |          |             | n.d.a.                       |
| Aspiration hazard:  |          |       |         |          |             | n.d.a.                       |
| Symptoms:   |          |       |         |          |             | n.d.a.                       |

| Propan-2-ol                      |          |           |         |          |                                  |       |
|----------------------------------|----------|-----------|---------|----------|----------------------------------|-------|
| Toxicity / effect                | Endpoint | Value     | Unit    | Organism | Test method                      | Notes |
| Acute toxicity, by oral route:   | LD50     | 4570-5840 | mg/kg   | Rat      | OECD 401 (Acute Oral Toxicity)   |       |
| Acute toxicity, by dermal route: | LD50     | 13900     | mg/kg   | Rabbit   | OECD 402 (Acute Dermal Toxicity) |       |
| Acute toxicity, by inhalation:   | LC50     | 30        | mg/l/4h | Rat      |                                  |       |

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|   |       |      |       |                        |  |  |
|---|-------|------|-------|------------------------|--|--|
| Skin corrosion/irritation:  |       |      |       | Rabbit                 | OECD 404 (Acute Dermal Irritation/Corrosion)                   | Not irritant   |
| Serious eye damage/irritation:  |       |      |       | Rabbit                 | OECD 405 (Acute Eye Irritation/Corrosion)                      | Eye Irrit. 2   |
| Respiratory or skin sensitisation:                                      |       |      |       | Guinea pig             | OECD 406 (Skin Sensitisation)                                  | No (skin contact)  |
| Germ cell mutagenicity:   |       |      |       | Salmonella typhimurium | OECD 471 (Bacterial Reverse Mutation Test)                     | Negative   |
| Germ cell mutagenicity:   |       |      |       | Salmonella typhimurium | (Ames-Test)  | Negative   |
| Germ cell mutagenicity:   |       |      |       | Mouse                  | OECD 474 (Mammalian Erythrocyte Micronucleus Test)             | Negative   |
| Germ cell mutagenicity:   |       |      |       |                        | OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)          | Negative   |
| Carcinogenicity:  |       |      |       |                        |  | Negative   |
| Specific target organ toxicity - single exposure (STOT-SE):             |       |      |       |                        |  | STOT SE 3, H336  |
| Specific target organ toxicity - repeated exposure (STOT-RE):           |       |      |       |                        |  | Target organ(s): liver   |
| Aspiration hazard:  |       |      |       |                        |  | No   |
| Symptoms:   |       |      |       |                        |  | breathing difficulties, unconsciousness, vomiting, headaches, fatigue, dizziness, nausea |
| Specific target organ toxicity - repeated exposure (STOT-RE), oral:     | NOAEL | 900  | mg/kg | Rat                    | OECD 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents) |  |
| Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.: | NOAEL | 5000 | ppm   | Rat                    |  | Vapours  |

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| Toxicity / effect                  | Endpoint | Value | Unit    | Organism               | Test method  | Notes                               |
|------------------------------------|----------|-------|---------|------------------------|--|-------------------------------------|
| Acute toxicity, by oral route:     | LD50     | 1746  | mg/kg   | Rat                    | OECD 401 (Acute Oral Toxicity)                             |                                     |
| Acute toxicity, by dermal route:   | LD50     | 1060  | mg/kg   | Rabbit                 |  |                                     |
| Acute toxicity, by inhalation:     | LC50     | 10-20 | mg/l/4h | Rat                    |  | Vapours                             |
| Skin corrosion/irritation:         |          |       |         | Rabbit                 | Regulation (EC) 440/2008 B.4 (DERMAL IRRITATION/CORROSION) | Skin Irrit. 2, Product removes fat. |
| Serious eye damage/irritation:     |          |       |         | Rabbit                 | OECD 405 (Acute Eye Irritation/Corrosion)                  | Eye Irrit. 2                        |
| Respiratory or skin sensitisation: |          |       |         | Guinea pig             | OECD 406 (Skin Sensitisation)                              | No (skin contact)                   |
| Germ cell mutagenicity:            |          |       |         | Mouse                  | OECD 474 (Mammalian Erythrocyte Micronucleus Test)         | Negative                            |
| Germ cell mutagenicity:            |          |       |         | Salmonella typhimurium | OECD 471 (Bacterial Reverse Mutation Test)                 | Negative                            |
| Germ cell mutagenicity:            |          |       |         |                        | OECD 473 (In Vitro Mammalian Chromosome Aberration Test)   | Negative                            |

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|   |       |      |            |        |  |  |
|---|-------|------|------------|--------|--|--|
| Germ cell mutagenicity:   |       |      |            |        | OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)          | Negative   |
| Carcinogenicity:  |       |      |            | Rat    | OECD 451 (Carcinogenicity Studies)                             | Negative   |
| Carcinogenicity:  | NOAEC | 125  | ppm        | Mouse  | OECD 451 (Carcinogenicity Studies)                             | Negative   |
| Aspiration hazard:<br>Symptoms:                                       |       |      |            |        |  | No<br>acidosis, ataxia,<br>breathing difficulties,<br>respiratory distress,<br>drowsiness,<br>unconsciousness,<br>, annoyance,<br>coughing,<br>headaches,<br>gastrointestinal disturbances,<br>insomnia,<br>mucous membrane irritation,<br>dizziness |
| Specific target organ toxicity - repeated exposure (STOT-RE), oral:   | NOAEL | <69  | mg/kg bw/d | Rat    | OECD 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents) |  |
| Specific target organ toxicity - repeated exposure (STOT-RE), dermal: | NOAEL | >150 | mg/kg bw/d | Rabbit | OECD 411 (Subchronic Dermal Toxicity - 90-day Study)           |  |

## SECTION 12: Ecological information

Possibly more information on environmental effects, see Section 2.1 (classification).

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|--|----------|------|-------|------|----------|-------------|---|
| Toxicity / effect                        | Endpoint | Time | Value | Unit | Organism | Test method | Notes                                     |
| 12.1. Toxicity to fish:                  |          |      |       |      |          |             | n.d.a.                                    |
| 12.1. Toxicity to daphnia:               |          |      |       |      |          |             | n.d.a.                                    |
| 12.1. Toxicity to algae:                 |          |      |       |      |          |             | n.d.a.                                    |
| 12.2. Persistence and degradability:     |          |      |       |      |          |             | n.d.a.                                    |
| 12.3. Bioaccumulative potential:         |          |      |       |      |          |             | n.d.a.                                    |
| 12.4. Mobility in soil:                  |          |      |       |      |          |             | n.d.a.                                    |
| 12.5. Results of PBT and vPvB assessment |          |      |       |      |          |             | n.d.a.                                    |
| 12.6. Other adverse effects:             |          |      |       |      |          |             | n.d.a.                                    |
| Other information:                       |          |      |       |      |          |             | According to the recipe, contains no AOX. |

| Propan-2-ol                |          |      |       |      |                    |             |       |
|----------------------------|----------|------|-------|------|--------------------|-------------|-------|
| Toxicity / effect          | Endpoint | Time | Value | Unit | Organism           | Test method | Notes |
| Toxicity to bacteria:      | EC10     | 16h  | 1050  | mg/l | Pseudomonas putida |             |       |
| 12.1. Toxicity to daphnia: | EC50     | 16d  | 141   | mg/l | Daphnia magna      |             |       |
| 12.1. Toxicity to fish:    | LC50     | 96h  | >100  | mg/l | Leuciscus idus     |             |       |

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|  |         |     |       |      |                         |  |                                     |
|--|---------|-----|-------|------|-------------------------|--|-------------------------------------|
| 12.1. Toxicity to fish:                  | LC50    | 96h | 1400  | mg/l | Lepomis macrochirus     |  |                                     |
| 12.1. Toxicity to daphnia:               | EC50    | 48h | 2285  | mg/l | Daphnia magna           |  |                                     |
| 12.1. Toxicity to algae:                 | EC50    | 72h | >100  | mg/l | Desmodesmus subspicatus |  |                                     |
| 12.2. Persistence and degradability:     |         | 21d | 95    | %    |                         | OECD 301 E (Ready Biodegradability - Modified OECD Screening Test)               | Readily biodegradable               |
| 12.2. Persistence and degradability:     |         |     | 99,9  | %    |                         | OECD 303 A (Simulation Test - Aerobic Sewage Treatment - Activated Sludge Units) | Readily biodegradable               |
| 12.3. Bioaccumulative potential:         | Log Pow |     | 0,05  |      |                         | OECD 107 (Partition Coefficient (n-octanol/water) - Shake Flask Method)          | Slight                              |
| 12.5. Results of PBT and vPvB assessment |         |     |       |      |                         |  | No PBT substance, No vPvB substance |
| 12.4. Mobility in soil:                  | Koc     |     | 1,1   |      |                         |  | Expert judgement                    |
| Toxicity to bacteria:                    | EC50    |     | >1000 | mg/l | activated sludge        |  |                                     |
| Other information:                       | ThOD    |     | 2,4   | g/g  |                         |  |                                     |
| Other information:                       | BOD5    |     | 53    | %    |                         |  |                                     |
| Other information:                       | COD     |     | 96    | %    |                         |  | References                          |
| Other information:                       | COD     |     | 2,4   | g/g  |                         |  |                                     |
| Other information:                       | BOD     |     | 1171  | mg/g |                         |  |                                     |

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| Toxicity / effect                    | Endpoint  | Time | Value | Unit | Organism                        | Test method  | Notes                 |
|--------------------------------------|-----------|------|-------|------|---------------------------------|--|-----------------------|
| 12.1. Toxicity to fish:              | LC50      | 96h  | 1474  | mg/l | Oncorhynchus mykiss             | OECD 203 (Fish, Acute Toxicity Test)                               |                       |
| 12.1. Toxicity to fish:              | NOEC/NOEL | 21d  | >100  | mg/l | Brachydanio rerio               | OECD 204 (Fish, Prolonged Toxicity Test - 14-Day Study)            |                       |
| 12.1. Toxicity to daphnia:           | EC50      | 48h  | 1550  | mg/l | Daphnia magna                   | OECD 202 (Daphnia sp. Acute Immobilisation Test)                   |                       |
| 12.1. Toxicity to daphnia:           | NOEC/NOEL | 21d  | 100   | mg/l | Daphnia magna                   | OECD 211 (Daphnia magna Reproduction Test)                         |                       |
| 12.1. Toxicity to algae:             | EC50      | 72h  | 1840  | mg/l | Pseudokirchneriella subcapitata | OECD 201 (Alga, Growth Inhibition Test)                            |                       |
| 12.1. Toxicity to algae:             | NOEC/NOEL | 72h  | 286   | mg/l | Pseudokirchneriella subcapitata | OECD 201 (Alga, Growth Inhibition Test)                            |                       |
| 12.2. Persistence and degradability: |           | 28d  | 95    | %    |                                 | OECD 301 E (Ready Biodegradability - Modified OECD Screening Test) | Readily biodegradable |

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|  |           |     |           |            |                    |   |                                     |
|--|-----------|-----|-----------|------------|--------------------|---|-------------------------------------|
| 12.2. Persistence and degradability:     |           | 28d | >99       | %          |                    | OECD 302 B (Inherent Biodegradability - Zahn-Wellens/EMPA Test)         | Readily biodegradable               |
| 12.3. Bioaccumulative potential:         | BCF       |     | 3,2       |            |                    |   | Slight                              |
| 12.3. Bioaccumulative potential:         | Log Pow   |     | 0,81      |            |                    | OECD 107 (Partition Coefficient (n-octanol/water) - Shake Flask Method) | Not to be expected                  |
| 12.4. Mobility in soil:                  | H (Henry) |     | 0,0000016 | atm*m3/mol |                    |   |                                     |
| 12.4. Mobility in soil:                  | Koc       |     | 67        |            |                    |   | Expert judgement                    |
| 12.5. Results of PBT and vPvB assessment |           |     |           |            |                    |   | No PBT substance, No vPvB substance |
| Toxicity to bacteria:                    | EC10      | 16h | >700      | mg/l       | Pseudomonas putida | DIN 38412 T.8   |                                     |

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### For the substance / mixture / residual amounts

EC disposal code no.:

The waste codes are recommendations based on the scheduled use of this product. Owing to the user's specific conditions for use and disposal, other waste codes may be allocated under certain circumstances. (2014/955/EU)

07 06 01 aqueous washing liquids and mother liquors  
 20 01 29 detergents containing hazardous substances

Recommendation:

Sewage disposal shall be discouraged.

Pay attention to local and national official regulations.

E.g. dispose at suitable refuse site.

E.g. suitable incineration plant.

#### For contaminated packing material

Pay attention to local and national official regulations.

Empty container completely.

Uncontaminated packaging can be recycled.

Dispose of packaging that cannot be cleaned in the same manner as the substance.

Residues may present a risk of explosion.

## SECTION 14: Transport information

### General statements

14.1. UN number: 1987

#### Transport by road/by rail (ADR/RID)

14.2. UN proper shipping name:

UN 1987 ALCOHOLS, N.O.S. (ISOPROPYL ALCOHOL)

14.3. Transport hazard class(es):

3

14.4. Packing group:

III

Classification code:

F1

LQ:

5 L

14.5. Environmental hazards:

Not applicable

Tunnel restriction code:

D/E

#### Transport by sea (IMDG-code)



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14.2. UN proper shipping name:  
 ALCOHOLS, N.O.S. (ISOPROPYL ALCOHOL)

14.3. Transport hazard class(es):

3

14.4. Packing group:

III

EmS:

F-E, S-D

Marine Pollutant:

n.a

14.5. Environmental hazards:

Not applicable



**Transport by air (IATA)**

14.2. UN proper shipping name:

Alcohols, n.o.s. (ISOPROPYL ALCOHOL)

14.3. Transport hazard class(es):

3

14.4. Packing group:

III

14.5. Environmental hazards:

Not applicable



**14.6. Special precautions for user**

Persons employed in transporting dangerous goods must be trained.

All persons involved in transporting must observe safety regulations.

Precautions must be taken to prevent damage.

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

Freighted as packaged goods rather than in bulk, therefore not applicable.

Minimum amount regulations have not been taken into account.

Danger code and packing code on request.

Comply with special provisions.

**SECTION 15: Regulatory information**

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

Observe restrictions:

Comply with national regulations/laws governing maternity protection (national implementation of the Directive 92/85/EEC)!

Comply with trade association/occupational health regulations.

Directive 2012/18/EU ("Seveso III"), Annex I, Part 1 - The following categories apply to this product (others may also need to be considered according to storage, handling etc.):

| Hazard categories | Notes to Annex I | Qualifying quantity (tonnes) of dangerous substances as referred to in Article 3(10) for the application of - Lower-tier requirements | Qualifying quantity (tonnes) of dangerous substances as referred to in Article 3(10) for the application of - Upper-tier requirements |
|-------------------|------------------|---|---|
| P5c               |                  | 5000  | 50000   |

The Notes to Annex 1 of Directive 2012/18/EU, in particular those named in the tables here and notes 1-6, must be taken into account when assigning categories and qualifying quantities.

Directive 2010/75/EU (VOC):

33,5 %

**REGULATION (EC) No 648/2004**

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**15.2 Chemical safety assessment**

A chemical safety assessment is not provided for mixtures.

**SECTION 16: Other information**

Revised sections:

8

Employee training in handling dangerous goods is required.

These details refer to the product as it is delivered.

Employee instruction/training in handling hazardous materials is required.

**Classification and processes used to derive the classification of the mixture in accordance with the ordinance (EG) 1272/2008 (CLP):**

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| Classification in accordance with regulation (EC) No. 1272/2008 (CLP) | Evaluation method used                             |
|---|--|
| Flam. Liq. 3, H226  | Classification based on test data.                 |
| Eye Irrit. 2, H319  | Classification according to calculation procedure. |
| STOT SE 3, H336   | Classification according to calculation procedure. |

The following phrases represent the posted Hazard Class and Risk Category Code (GHS/CLP) of the product and the constituents (specified in Section 2 and 3).

H225 Highly flammable liquid and vapour.  
 H302 Harmful if swallowed.  
 H312 Harmful in contact with skin.  
 H315 Causes skin irritation.  
 H319 Causes serious eye irritation.  
 H332 Harmful if inhaled.  
 H336 May cause drowsiness or dizziness.

Flam. Liq. — Flammable liquid  
 Eye Irrit. — Eye irritation  
 STOT SE — Specific target organ toxicity - single exposure - narcotic effects  
 Acute Tox. — Acute toxicity - oral  
 Skin Irrit. — Skin irritation  
 Acute Tox. — Acute toxicity - dermal  
 Acute Tox. — Acute toxicity - inhalation

### Any abbreviations and acronyms used in this document:

acc., acc. to according, according to  
 ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)  
 AOX Adsorbable organic halogen compounds  
 approx. approximately  
 Art., Art. no. Article number  
 ASTM ASTM International (American Society for Testing and Materials)  
 BAM Bundesanstalt für Materialforschung und -prüfung (Federal Institute for Materials Research and Testing, Germany)  
 BAuA Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (= Federal Institute for Occupational Health and Safety, Germany)  
 BSEF The International Bromine Council  
 bw body weight  
 CAS Chemical Abstracts Service  
 CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)  
 CMR carcinogenic, mutagenic, reproductive toxic  
 DMEL Derived Minimum Effect Level  
 DNEL Derived No Effect Level  
 dw dry weight  
 e.g. for example (abbreviation of Latin 'exempli gratia'), for instance  
 EC European Community  
 ECHA European Chemicals Agency  
 EEC European Economic Community  
 EINECS European Inventory of Existing Commercial Chemical Substances  
 ELINCS European List of Notified Chemical Substances  
 EN European Norms  
 EPA United States Environmental Protection Agency (United States of America)  
 etc. et cetera  
 EU European Union  
 EVAL Ethylene-vinyl alcohol copolymer  
 Fax. Fax number  
 gen. general  
 GHS Globally Harmonized System of Classification and Labelling of Chemicals  
 GWP Global warming potential

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IARC International Agency for Research on Cancer  
IATA International Air Transport Association  
IBC (Code) International Bulk Chemical (Code)  
IMDG-code International Maritime Code for Dangerous Goods  
incl. including, inclusive  
IUCLID International Uniform Chemical Information Database  
LQ Limited Quantities  
MARPOL International Convention for the Prevention of Marine Pollution from Ships  
n.a. not applicable  
n.av. not available  
n.c. not checked  
n.d.a. no data available  
OECD Organisation for Economic Co-operation and Development  
org. organic  
PBT persistent, bioaccumulative and toxic  
PE Polyethylene  
PNEC Predicted No Effect Concentration  
ppm parts per million  
PVC Polyvinylchloride  
REACH Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals)  
REACH-IT List-No. 9xx-xxx-x No. is automatically assigned, e.g. to pre-registrations without a CAS No. or other numerical identifier. List Numbers do not have any legal significance, rather they are purely technical identifiers for processing a submission via REACH-IT.  
RID Règlement concernant le transport International ferroviaire de marchandises Dangereuses (= Regulation concerning the International Carriage of Dangerous Goods by Rail)  
SVHC Substances of Very High Concern  
Tel. Telephone  
UN RTDG United Nations Recommendations on the Transport of Dangerous Goods  
VOC Volatile organic compounds  
vPvB very persistent and very bioaccumulative  
wwt wet weight

The statements made here should describe the product with regard to the necessary safety precautions - they are not meant to guarantee definite characteristics - but they are based on our present up-to-date knowledge.

No responsibility.

These statements were made by:

**Chemical Check GmbH, Chemical Check Platz 1-7, D-32839 Steinheim, Tel.: +49 5233 94 17 0, Fax: +49 5233 94 17 90**

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