

## 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

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

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

Gravel protection

##### 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, 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)

| Hazard class    | Hazard category | Hazard statement                                      |
|-----------------|-----------------|---|
| Eye Irrit.      | 2               | H319-Causes serious eye irritation.                   |
| Skin Irrit.     | 2               | H315-Causes skin irritation.                          |
| Asp. Tox.       | 1               | H304-May be fatal if swallowed and enters airways.    |
| STOT SE         | 3               | H336-May cause drowsiness or dizziness.               |
| Aquatic Chronic | 2               | H411-Toxic to aquatic life with long lasting effects. |
| Aerosol         | 1               | H222-Extremely flammable aerosol.                     |
| Aerosol         | 1               | H229-Pressurised container: May burst if heated.      |

#### 2.2 Label elements

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

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## Danger

H319-Causes serious eye irritation. H315-Causes skin irritation. H336-May cause drowsiness or dizziness. H411-Toxic to aquatic life with long lasting effects. H222-Extremely flammable aerosol. H229-Pressurised container: May burst if heated.

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. P211-Do not spray on an open flame or other ignition source. P261-Avoid breathing vapours or spray. P271-Use only outdoors or in a well-ventilated area. P280-Wear protective gloves / eye protection / face protection.  
 P305+P351+P338-IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P312-Call a POISON CENTRE / doctor if you feel unwell.  
 P405-Store locked up. P410+P412-Protect from sunlight. Do not expose to temperatures exceeding 50 °C.  
 P501-Dispose of contents / container to an approved waste disposal facility.

Without adequate ventilation, formation of explosive mixtures may be possible.

Butanone

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

Naphtha (petroleum), hydrotreated light

## 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 %).

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

n.a.

### 3.2 Mixtures

| Dimethyl ether  | Substance for which an EU exposure limit value applies. |
|---|---|
| Registration number (REACH)                                 | 01-2119472128-37-XXXX                                   |
| Index   | 603-019-00-8  |
| EINECS, ELINCS, NLP   | 204-065-8   |
| CAS   | 115-10-6  |
| content %   | 25-<50  |
| Classification according to Regulation (EC) 1272/2008 (CLP) | Flam. Gas 1A, H220                                      |
| Naphtha (petroleum), hydrotreated light                     |   |
| Registration number (REACH)                                 | ---   |
| Index   | 649-328-00-1  |
| EINECS, ELINCS, NLP   | 265-151-9   |
| CAS   | 64742-49-0  |
| content %   | 10-<20  |

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|   |   |
|---|---|
| <b>Classification according to Regulation (EC) 1272/2008 (CLP)</b>          | Flam. Liq. 2, H225<br>Skin Irrit. 2, H315<br>Aquatic Chronic 2, H411<br>Asp. Tox. 1, H304<br>STOT SE 3, H336                                      |
| <b>Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics</b>                     |   |
| <b>Registration number (REACH)</b>  | 01-2119475515-33-XXXX   |
| <b>Index</b>  | ---   |
| <b>EINECS, ELINCS, NLP</b>  | 927-510-4 (REACH-IT List-No.)   |
| <b>CAS</b>  | ---   |
| <b>content %</b>  | 5-<10   |
| <b>Classification according to Regulation (EC) 1272/2008 (CLP)</b>          | Flam. Liq. 2, H225<br>Asp. Tox. 1, H304<br>Skin Irrit. 2, H315<br>STOT SE 3, H336<br>Aquatic Chronic 2, H411                                      |
| <b>Ethyl acetate</b>  | <b>Substance for which an EU exposure limit value applies.</b>  |
| <b>Registration number (REACH)</b>  | 01-2119475103-46-XXXX   |
| <b>Index</b>  | 607-022-00-5  |
| <b>EINECS, ELINCS, NLP</b>  | 205-500-4   |
| <b>CAS</b>  | 141-78-6  |
| <b>content %</b>  | 5-<10   |
| <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>Butanone</b>   | <b>Substance for which an EU exposure limit value applies.</b>  |
| <b>Registration number (REACH)</b>  | ---   |
| <b>Index</b>  | 606-002-00-3  |
| <b>EINECS, ELINCS, NLP</b>  | 201-159-0   |
| <b>CAS</b>  | 78-93-3   |
| <b>content %</b>  | 5-<10   |
| <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>Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics</b>                  |   |
| <b>Registration number (REACH)</b>  | 01-2119473851-33-XXXX   |
| <b>Index</b>  | ---   |
| <b>EINECS, ELINCS, NLP</b>  | 920-750-0 (REACH-IT List-No.)   |
| <b>CAS</b>  | ---   |
| <b>content %</b>  | 3-<5  |
| <b>Classification according to Regulation (EC) 1272/2008 (CLP)</b>          | Flam. Liq. 2, H225<br>Asp. Tox. 1, H304<br>STOT SE 3, H336<br>Aquatic Chronic 2, H411   |
| <b>Cyclohexane</b>  | <b>Substance for which an EU exposure limit value applies.</b>  |
| <b>Registration number (REACH)</b>  | 01-2119463273-41-XXXX   |
| <b>Index</b>  | 601-017-00-1  |
| <b>EINECS, ELINCS, NLP</b>  | 203-806-2   |
| <b>CAS</b>  | 110-82-7  |
| <b>content %</b>  | 1-<5  |
| <b>Classification according to Regulation (EC) 1272/2008 (CLP)</b>          | Flam. Liq. 2, H225<br>Asp. Tox. 1, H304<br>Skin Irrit. 2, H315<br>STOT SE 3, H336<br>Aquatic Acute 1, H400 (M=1)<br>Aquatic Chronic 1, H410 (M=1) |
| <b>Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, &lt;5% n-hexane</b> |   |
| <b>Registration number (REACH)</b>  | 01-2119475514-35-XXXX   |

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| <b>Index</b>   | ---  |
| <b>EINECS, ELINCS, NLP</b>   | 921-024-6 (REACH-IT List-No.)  |
| <b>CAS</b>   | ---  |
| <b>content %</b>   | 1-<3   |
| <b>Classification according to Regulation (EC) 1272/2008 (CLP)</b> | Flam. Liq. 2, H225<br>Asp. Tox. 1, H304<br>Skin Irrit. 2, H315<br>STOT SE 3, H336<br>Aquatic Chronic 2, H411 |

|  |  |
|--|--|
| <b>Hydrocarbons, C9, aromatics</b>                                 |  |
| <b>Registration number (REACH)</b>                                 | 01-2119455851-35-XXXX  |
| <b>Index</b>   | ---  |
| <b>EINECS, ELINCS, NLP</b>   | 918-668-5 (REACH-IT List-No.)  |
| <b>CAS</b>   | (64742-95-6)   |
| <b>content %</b>   | 1-<2,5   |
| <b>Classification according to Regulation (EC) 1272/2008 (CLP)</b> | Flam. Liq. 3, H226<br>Asp. Tox. 1, H304<br>STOT SE 3, H335<br>STOT SE 3, H336<br>Aquatic Chronic 2, H411 |

Impurities, test data and additional information may have been taken into account in classifying and labelling the product.  
 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.  
 If, for example, the note P is applied for a hydrocarbon then this has already been taken into account for the classification named here.  
 Quote: "Note P - The classification as a carcinogen or mutagen need not apply if it can be shown that the substance contains less than 0,1 % w/w benzene (EINECS No 200-753-7)."  
 Article 4 of the regulation (EC) no. 1272/2008 (CLP regulation) was also observed and taken into account for the classification named here.

## 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

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

Remove polluted, soaked clothing immediately, wash thoroughly with plenty of water and soap, in case of irritation of the skin (flare), consult a doctor.

#### Eye contact

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

#### Ingestion

Rinse the mouth thoroughly with water.  
 Do not induce vomiting. Consult doctor immediately.  
 Danger of aspiration.

In case of vomiting, keep head low so that the stomach content does not reach the lungs.

### 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

Symptomatic treatment.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

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### **Suitable extinguishing media**

CO<sub>2</sub>

Extinction powder

Sand

### **Unsuitable extinguishing media**

Water

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

Toxic pyrolysis products.

Danger of explosion by prolonged heating.

Explosive vapour/air or gas/air mixtures.

### **5.3 Advice for firefighters**

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

Protective respirator with independent air supply.

Full protection, if necessary.

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**

Remove possible causes of ignition - do not smoke.

Ensure sufficient supply of air.

Avoid inhalation, and contact with eyes or skin.

### **6.2 Environmental precautions**

If leakage occurs, dam up.

Resolve leaks if this possible without risk.

Prevent from entering drainage system.

Prevent surface and ground-water infiltration, as well as ground penetration.

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

If spray or gas escapes, ensure ample fresh air is available.

Active substance:

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.

Keep away from sources of ignition - Do not smoke.

Do not use on hot surfaces.

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.

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Not to be stored in gangways or stair wells.  
 Store product closed and only in original packing.  
 Observe special regulations for aerosols!  
 Observe special storage conditions.  
 Do not store with flammable or self-igniting materials.  
 Keep protected from direct sunlight and temperatures over 50°C.  
 Store in a well ventilated place.  
 Store cool.  
 Store in a dry place.

### 7.3 Specific end use(s)

No information available at present.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Workplace exposure limit (WEL) of the total hydrocarbon solvent content of the mixture (RCP method according to EH40):  
 800 mg/m<sup>3</sup>

| Chemical Name  | Dimethyl ether                                   | Content %:25-<br><50 |
|--|--|----------------------|
| WEL-TWA: 400 ppm (766 mg/m <sup>3</sup> ) (WEL), 1000 ppm (1920 mg/m <sup>3</sup> ) (EU) | WEL-STEL: 500 ppm (958 mg/m <sup>3</sup> ) (WEL) | ---                  |
| Monitoring procedures:   | - Compur - KITA-123 S (549 129)                  |                      |
| BMGV: ---  | Other information: ---                           |                      |

| Chemical Name                  | Naphtha (petroleum), hydrotreated light                             | Content %:10-<br><20 |
|--------------------------------|---|----------------------|
| WEL-TWA: 800 mg/m <sup>3</sup> | WEL-STEL: ---   | ---                  |
| Monitoring procedures:         | - Compur - KITA-187 S (551 174)                                     |                      |
| BMGV: ---                      | Other information: (OEL acc. to RCP-method, paragraphs 84-87, EH40) |                      |

| Chemical Name                  | Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics   | Content %:5-<10 |
|--------------------------------|--|-----------------|
| WEL-TWA: 800 mg/m <sup>3</sup> | WEL-STEL: ---  | ---             |
| Monitoring procedures:         | - Draeger - Hydrocarbons 0,1%/c (81 03 571)<br>- Draeger - Hydrocarbons 2/a (81 03 581)<br>- Compur - KITA-187 S (551 174) |                 |
| BMGV: ---                      | Other information: (OEL acc. to RCP-method, paragraphs 84-87, EH40)  |                 |

| Chemical Name                                       | Ethyl acetate   | Content %:5-<10 |
|---|---|-----------------|
| WEL-TWA: 200 ppm (734 mg/m <sup>3</sup> ) (WEL, EU) | WEL-STEL: 400 ppm (1468 mg/m <sup>3</sup> ) (WEL, EU)   | ---             |
| Monitoring procedures:                              | - Draeger - Ethyl Acetate 200/a (CH 20 201)<br>- Compur - KITA-111 SA (549 160)<br>- Compur - KITA-111 U(C) (549 178)<br>- DFG Meth. Nr. 1 (D) (Loesungsmittelgemische 2), DFG (E) (Solvent mixtures 2) - 1993, 2002<br>- DFG Meth. Nr. 2 (D) (Loesungsmittelgemische 3), DFG (E) (Solvent mixtures 3) - 2014, 2002<br>- DFG Meth. Nr. 6 (D) (Loesungsmittelgemische 4), DFG (E) (Solvent mixtures 4) - 2014, 2002<br>- NIOSH 1457 (ETHYL ACETATE) - 1994<br>- NIOSH 2549 (VOLATILE ORGANIC COMPOUNDS (SCREENING)) - 1996 |                 |
| BMGV: ---   | Other information: ---  |                 |

| Chemical Name                                       | Butanone  | Content %:5-<10 |
|---|---|-----------------|
| WEL-TWA: 200 ppm (600 mg/m <sup>3</sup> ) (WEL, EU) | WEL-STEL: 300 ppm (899 mg/m <sup>3</sup> ) (WEL), 300 ppm (900 mg/m <sup>3</sup> ) (EU)   | ---             |
| Monitoring procedures:                              | - Compur - KITA-122 SA(C) (549 277)<br>- Compur - KITA-139 SB (549 731)<br>- Compur - KITA-139 U (549 749)<br>- DFG Meth.-Nr. 4 (D) (Loesungsmittelgemische 4), DFG (E) (Solvent mixtures 4) - 2015, 2002 |                 |

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|---|--|
| INSHT MTA/MA-031/A96 (Determination of ketones (acetone, methyl ethyl ketone, methyl isobutyl ketone) in air - Charcoal tube method / Gas chromatography) - 1996 - EU project BC/CEN/ENTR/000/2002-16 card 105-1 (2004) |  |
| -   | MDHS 72 (Volatile organic compounds in air – Laboratory method using pumped solid sorbent tubes, thermal desorption and gas chromatography) - 1993 |
| -   | NIOSH 2500 (METHYL ETHYL KETONE) - 1996  |
| -   | NIOSH 2549 (VOLATILE ORGANIC COMPOUNDS (SCREENING)) - 1996   |
| -   | NIOSH 2555 (KETONES I) - 2003  |
| -   | NIOSH 3800 (ORGANIC AND INORGANIC GASES BY EXTRACTIVE FTIR SPECTROMETRY) - 2016  |
| -   | OSHA 1004 (2-Butanone (MEK) Hexone (MIBK)) - 2000  |
| BMGV: 70 µmol butan-2-one/l in urine, post shift (BMGV)   | Other information: Sk  |

| Chemical Name          | Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics  | Content %:3-<5 |
|------------------------|--|----------------|
| WEL-TWA: 1200 mg/m3    | WEL-STEL: ---  | ---            |
| Monitoring procedures: | <ul style="list-style-type: none"> <li>- Draeger - Hydrocarbons 0,1%/c (81 03 571)</li> <li>- Draeger - Hydrocarbons 2/a (81 03 581)</li> <li>- Compur - KITA-187 S (551 174)</li> </ul> |                |
| BMGV: ---              | Other information: (OEL acc. to RCP-method, paragraphs 84-87, EH40)  |                |

| Chemical Name  | Cyclohexane  | Content %:1-<5 |
|--|--|----------------|
| WEL-TWA: 350 mg/m3 (100 ppm) (WEL), 700 mg/m3 (200 ppm) (EU) | WEL-STEL: 1050 mg/m3 (300 ppm)   | ---            |
| Monitoring procedures:                                       | <ul style="list-style-type: none"> <li>- Draeger - Cyclohexane 40/a (81 03 671)</li> <li>- Compur - KITA-115 S (551 133)</li> <li>- NIOSH 1500 (HYDROCARBONS, BP 36°-216 °C) - 2003</li> <li>- OSHA 1022 (Cyclohexane) - 2018</li> </ul> |                |
| BMGV: ---  | Other information: ---   |                |

| Chemical Name          | Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane                 | Content %:1-<3 |
|------------------------|---|----------------|
| WEL-TWA: 800 mg/m3     | WEL-STEL: ---   | ---            |
| Monitoring procedures: | <ul style="list-style-type: none"> <li>- Compur - KITA-187 S (551 174)</li> </ul> |                |
| BMGV: ---              | Other information: (OEL acc. to RCP-method, paragraphs 84-87, EH40)               |                |

| Chemical Name                  | Hydrocarbons, C9, aromatics  | Content %:1-<2,5 |
|--------------------------------|--|------------------|
| WEL-TWA: 500 mg/m3 (Aromatics) | WEL-STEL: ---  | ---              |
| Monitoring procedures:         | <ul style="list-style-type: none"> <li>- Draeger - Hydrocarbons 0,1%/c (81 03 571)</li> <li>- Draeger - Hydrocarbons 2/a (81 03 581)</li> <li>- Compur - KITA-187 S (551 174)</li> </ul> |                  |
| BMGV: ---                      | Other information: ---   |                  |

| Chemical Name                | Talc                   | Content %: |
|------------------------------|------------------------|------------|
| WEL-TWA: 1 mg/m3 (res. dust) | WEL-STEL: ---          | ---        |
| Monitoring procedures:       | ---                    |            |
| BMGV: ---                    | Other information: --- |            |

| Dimethyl ether      |  |                  |            |       |       |      |
|---------------------|--|------------------|------------|-------|-------|------|
| Area of application | Exposure route / Environmental compartment           | Effect on health | Descriptor | Value | Unit  | Note |
|                     | Environment - freshwater                             |                  | PNEC       | 0,155 | mg/l  |      |
|                     | Environment - sediment, freshwater                   |                  | PNEC       | 0,681 | mg/kg |      |
|                     | Environment - soil                                   |                  | PNEC       | 0,045 | mg/kg |      |
|                     | Environment - sewage treatment plant                 |                  | PNEC       | 160   | mg/l  |      |
|                     | Environment - marine                                 |                  | PNEC       | 0,016 | mg/l  |      |
|                     | Environment - water, sporadic (intermittent) release |                  | PNEC       | 1,549 | mg/l  |      |
|                     | Environment - sediment, marine                       |                  | PNEC       | 0,069 | mg/kg |      |



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|                     |                    |                             |      |      |                   |  |
|---------------------|--------------------|-----------------------------|------|------|-------------------|--|
| Consumer            | Human - inhalation | Long term, systemic effects | DNEL | 471  | mg/m <sup>3</sup> |  |
| Workers / employees | Human - inhalation | Long term, systemic effects | DNEL | 1894 | mg/m <sup>3</sup> |  |

| <b>Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics</b> |  |                             |            |       |                   |      |
|---|--|-----------------------------|------------|-------|-------------------|------|
| Area of application                                     | Exposure route / Environmental compartment | Effect on health            | Descriptor | Value | Unit              | Note |
| Consumer  | Human - dermal                             | Long term, systemic effects | DNEL       | 149   | mg/kg bw/d        |      |
| Consumer  | Human - inhalation                         | Long term, systemic effects | DNEL       | 447   | mg/m <sup>3</sup> |      |
| Consumer  | Human - oral                               | Long term, systemic effects | DNEL       | 149   | mg/kg bw/d        |      |
| Workers / employees                                     | Human - dermal                             | Long term, systemic effects | DNEL       | 300   | mg/kg bw/d        |      |
| Workers / employees                                     | Human - inhalation                         | Long term, systemic effects | DNEL       | 2085  | mg/m <sup>3</sup> |      |

| <b>Ethyl acetate</b> |  |                              |            |       |                   |      |
|----------------------|--|------------------------------|------------|-------|-------------------|------|
| Area of application  | Exposure route / Environmental compartment           | Effect on health             | Descriptor | Value | Unit              | Note |
|                      | Environment - freshwater                             |                              | PNEC       | 0,24  | mg/l              |      |
|                      | Environment - marine                                 |                              | PNEC       | 0,024 | mg/l              |      |
|                      | Environment - water, sporadic (intermittent) release |                              | PNEC       | 1,65  | mg/l              |      |
|                      | Environment - sediment, freshwater                   |                              | PNEC       | 1,15  | mg/kg             |      |
|                      | Environment - sediment, marine                       |                              | PNEC       | 0,115 | mg/kg             |      |
|                      | Environment - soil                                   |                              | PNEC       | 0,148 | mg/kg             |      |
|                      | Environment - sewage treatment plant                 |                              | PNEC       | 650   | mg/l              |      |
|                      | Environment - oral (animal feed)                     |                              | PNEC       | 200   | mg/kg             |      |
| Consumer             | Human - oral   | Long term, systemic effects  | DNEL       | 4,5   | mg/kg             |      |
| Consumer             | Human - dermal                                       | Long term, systemic effects  | DNEL       | 37    | mg/kg             |      |
| Consumer             | Human - inhalation                                   | Long term, systemic effects  | DNEL       | 367   | mg/m <sup>3</sup> |      |
| Consumer             | Human - inhalation                                   | Long term, local effects     | DNEL       | 367   | mg/m <sup>3</sup> |      |
| Consumer             | Human - inhalation                                   | Short term, systemic effects | DNEL       | 734   | mg/m <sup>3</sup> |      |
| Consumer             | Human - inhalation                                   | Short term, local effects    | DNEL       | 734   | mg/m <sup>3</sup> |      |
| Workers / employees  | Human - dermal                                       | Long term, systemic effects  | DNEL       | 63    | mg/kg             |      |
| Workers / employees  | Human - inhalation                                   | Long term, systemic effects  | DNEL       | 734   | mg/m <sup>3</sup> |      |
| Workers / employees  | Human - inhalation                                   | Long term, local effects     | DNEL       | 734   | mg/m <sup>3</sup> |      |
| Workers / employees  | Human - inhalation                                   | Short term, systemic effects | DNEL       | 1468  | mg/m <sup>3</sup> |      |
| Workers / employees  | Human - inhalation                                   | Short term, local effects    | DNEL       | 1468  | mg/m <sup>3</sup> |      |

**Butanone**



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| Area of application | Exposure route / Environmental compartment    | Effect on health | Descriptor | Value  | Unit         | Note                       |
|---------------------|---|------------------|------------|--------|--------------|----------------------------|
|                     | Environment - freshwater                      |                  | PNEC       | 55,8   | mg/l         |                            |
|                     | Environment - marine                          |                  | PNEC       | 55,8   | mg/l         |                            |
|                     | Environment - sediment, freshwater            |                  | PNEC       | 284,74 | mg/kg dw     |                            |
|                     | Environment - sediment, marine                |                  | PNEC       | 284,7  | mg/kg dw     |                            |
|                     | Environment - soil                            |                  | PNEC       | 22,5   | mg/kg dw     |                            |
|                     | Environment - sewage treatment plant          |                  | PNEC       | 709    | mg/l         |                            |
|                     | Environment - sporadic (intermittent) release |                  | PNEC       | 55,8   | mg/l         |                            |
|                     | Environment - oral (animal feed)              |                  | PNEC       | 1000   | mg/kg        |                            |
| Consumer            | Human - dermal                                | Long term        | DNEL       | 412    | mg/kg bw/day | Overall assesment factor 2 |
| Consumer            | Human - inhalation                            | Long term        | DNEL       | 106    | mg/m3        | Overall assesment factor 2 |
| Consumer            | Human - oral                                  | Long term        | DNEL       | 31     | mg/kg bw/day | Overall assesment factor 2 |
| Workers / employees | Human - dermal                                | Long term        | DNEL       | 1161   | mg/kg bw/day |                            |
| Workers / employees | Human - inhalation                            | Long term        | DNEL       | 600    | mg/m3        |                            |

| Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics |  |                             |            |       |            |      |
|---|--|-----------------------------|------------|-------|------------|------|
| Area of application                                 | Exposure route / Environmental compartment | Effect on health            | Descriptor | Value | Unit       | Note |
|   | Human - oral                               | Long term, systemic effects | DNEL       | 699   | mg/kg bw/d |      |
| Consumer  | Human - dermal                             | Long term, systemic effects | DNEL       | 699   | mg/kg bw/d |      |
| Consumer  | Human - inhalation                         | Long term, systemic effects | DNEL       | 608   | mg/m3      |      |
| Workers / employees                                 | Human - dermal                             | Long term, systemic effects | DNEL       | 773   | mg/kg bw/d |      |
| Workers / employees                                 | Human - inhalation                         | Long term, systemic effects | DNEL       | 2035  | mg/m3      |      |

| Cyclohexane         |  |                              |            |       |                  |      |
|---------------------|--|------------------------------|------------|-------|------------------|------|
| Area of application | Exposure route / Environmental compartment | Effect on health             | Descriptor | Value | Unit             | Note |
|                     | Environment - freshwater                   |                              | PNEC       | 0,207 | mg/l             |      |
|                     | Environment - marine                       |                              | PNEC       | 0,207 | mg/l             |      |
|                     | Environment - periodic release             |                              | PNEC       | 0,207 | mg/l             |      |
|                     | Environment - sediment                     |                              | PNEC       | 3,627 | mg/kg dry weight |      |
|                     | Environment - soil                         |                              | PNEC       | 2,99  | mg/kg dry weight |      |
|                     | Environment - sewage treatment plant       |                              | PNEC       | 3,24  | mg/l             |      |
| Consumer            | Human - inhalation                         | Short term, systemic effects | DNEL       | 412   | mg/m3            |      |
| Consumer            | Human - inhalation                         | Short term, local effects    | DNEL       | 412   | mg/m3            |      |

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|                     |                    |                              |      |      |                       |  |
|---------------------|--------------------|------------------------------|------|------|-----------------------|--|
| Consumer            | Human - dermal     | Long term, systemic effects  | DNEL | 1186 | mg/kg body weight/day |  |
| Consumer            | Human - inhalation | Long term, systemic effects  | DNEL | 206  | mg/m3                 |  |
| Consumer            | Human - oral       | Long term, systemic effects  | DNEL | 59,4 | mg/kg body weight/day |  |
| Consumer            | Human - inhalation | Long term, local effects     | DNEL | 206  | mg/m3                 |  |
| Workers / employees | Human - inhalation | Short term, local effects    | DNEL | 700  | mg/m3                 |  |
| Workers / employees | Human - inhalation | Short term, systemic effects | DNEL | 700  | mg/m3                 |  |
| Workers / employees | Human - inhalation | Long term, systemic effects  | DNEL | 700  | mg/m3                 |  |
| Workers / employees | Human - dermal     | Long term, systemic effects  | DNEL | 2016 | mg/kg body weight/day |  |
| Workers / employees | Human - inhalation | Long term, local effects     | DNEL | 700  | mg/m3                 |  |

**Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane**

| Area of application | Exposure route / Environmental compartment | Effect on health            | Descriptor | Value | Unit         | Note |
|---------------------|--|-----------------------------|------------|-------|--------------|------|
| Consumer            | Human - dermal                             | Long term, systemic effects | DNEL       | 699   | mg/kg bw/day |      |
| Consumer            | Human - inhalation                         | Long term, systemic effects | DNEL       | 608   | mg/m3        |      |
| Consumer            | Human - oral                               | Long term, systemic effects | DNEL       | 699   | mg/kg bw/day |      |
| Workers / employees | Human - dermal                             | Long term, systemic effects | DNEL       | 773   | mg/kg bw/day |      |
| Workers / employees | Human - inhalation                         | Long term, systemic effects | DNEL       | 2035  | mg/m3        |      |

**Hydrocarbons, C9, aromatics**

| Area of application | Exposure route / Environmental compartment | Effect on health            | Descriptor | Value | Unit         | Note |
|---------------------|--|-----------------------------|------------|-------|--------------|------|
| Consumer            | Human - inhalation                         | Long term, systemic effects | DNEL       | 32    | mg/m3        |      |
| Consumer            | Human - dermal                             | Long term, systemic effects | DNEL       | 11    | mg/kg bw/day |      |
| Consumer            | Human - oral                               | Long term, systemic effects | DNEL       | 11    | mg/kg bw/day |      |
| Workers / employees | Human - dermal                             | Long term, systemic effects | DNEL       | 25    | mg/kg bw/day |      |
| Workers / employees | Human - inhalation                         | Long term, systemic effects | DNEL       | 150   | mg/m3        |      |

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 (Directive 2017/164/EU, Directive 2004/37/CE). (9) = Respirable fraction (Directive 2017/164/EU, Directive 2004/37/CE). (11) = Inhalable fraction (Directive 2004/37/CE). (12) = Inhalable fraction. Respirable fraction in those Member States that implement, on the date of the entry into force of this Directive, a biomonitoring system with a biological limit value not exceeding 0,002 mg Cd/g creatinine in urine (Directive 2004/37/CE). | 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.

(13) = The substance can cause sensitisation of the skin and of the respiratory tract (Directive 2004/37/CE), (14) = The substance can cause

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sensitisation of the skin (Directive 2004/37/CE).

## 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. EN 14042.

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:

Protective nitrile gloves (EN 374).

Minimum layer thickness in mm:

$\geq 0,4$

Permeation time (penetration time) in minutes:

$\geq 480$

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

The recommended maximum wearing time is 50% of breakthrough time.

Protective hand cream recommended.

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.

Filter A P2 (EN 14387), code colour brown, white

With long-term contact:

Protective respirator with independent air supply.

Observe wearing time limitations for respiratory protection equipment.

Thermal hazards:

Not applicable

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:

Aerosol. Active substance: liquid.

Colour:

Grey

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|  |  |
|--|--|
| Odour:                                   | Characteristic   |
| Odour threshold:                         | Not determined   |
| pH-value:                                | Insoluble  |
| Melting point/freezing point:            | Not determined   |
| Initial boiling point and boiling range: | -25 °C   |
| Flash point:                             | < -20 °C (DIN 53213 (Pensky-Martens, closed cup), The flash-point of the mixture was not tested, but complies with the ingredient with the lowest value. ) |
| Evaporation rate:                        | Not determined   |
| Flammability (solid, gas):               | Not determined   |
| Lower explosive limit:                   | 0,6 Vol-%  |
| Upper explosive limit:                   | 18 Vol-%   |
| Vapour pressure:                         | 4500 hPa (20°C)  |
| Vapour pressure:                         | > 110 hPa (50°C)   |
| Vapour density (air = 1):                | Not determined   |
| Density:                                 | 0,84 g/cm <sup>3</sup> (20°C, DIN 51757)   |
| Bulk density:                            | Not determined   |
| Solubility(ies):                         | Not determined   |
| Water solubility:                        | Insoluble  |
| Partition coefficient (n-octanol/water): | Not determined   |
| Auto-ignition temperature:               | Not determined   |
| Decomposition temperature:               | Not determined   |
| Viscosity:                               | <=20,5 mm <sup>2</sup> /s (40°C)   |
| Explosive properties:                    | Not determined   |
| Oxidising properties:                    | Not determined   |
| <b>9.2 Other information</b>             |  |
| Miscibility:                             | Not determined   |
| Fat solubility / solvent:                | Not determined   |
| Conductivity:                            | Not determined   |
| Surface tension:                         | Not determined   |
| Solvents content:                        | 75 % (Organic solvents )   |

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

The product has not been tested.

### 10.2 Chemical stability

Stable with proper storage and handling.

### 10.3 Possibility of hazardous reactions

No dangerous reactions are known.

### 10.4 Conditions to avoid

Heating, open flame, ignition sources

Pressure increase will result in danger of bursting.

### 10.5 Incompatible materials

See also section 7.

Avoid contact with strong oxidizing agents.

### 10.6 Hazardous decomposition products

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:   |          |       |      |          |             | n.d.a. |
| Acute toxicity, by dermal route: |          |       |      |          |             | n.d.a. |
| Acute toxicity, by inhalation:   |          |       |      |          |             | n.d.a. |
| Skin corrosion/irritation:       |          |       |      |          |             | n.d.a. |

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|---|--|--|--|--|--|--------|
| 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. |

| Dimethyl ether  |          |       |         |          |   |   |
|---|----------|-------|---------|----------|---|---|
| Toxicity / effect   | Endpoint | Value | Unit    | Organism | Test method   | Notes   |
| Acute toxicity, by inhalation:                                | LC50     | 164   | mg/l/4h | Rat      |   |   |
| Skin corrosion/irritation:                                    |          |       |         |          |   | Not irritant  |
| Serious eye damage/irritation:                                |          |       |         |          |   | Not irritant  |
| Respiratory or skin sensitisation:                            |          |       |         |          |   | No (skin contact)   |
| Germ cell mutagenicity:                                       |          |       |         |          | OECD 471 (Bacterial Reverse Mutation Test)  | Negative  |
| Germ cell mutagenicity:                                       |          |       |         |          | OECD 473 (In Vitro Mammalian Chromosome Aberration Test)                                    | Negative  |
| Germ cell mutagenicity:                                       |          |       |         |          | OECD 477 (Genetic Toxicology - Sex-Linked Recessive Lethal Test in Drosophila melanogaster) | Negative  |
| Carcinogenicity:  | NOAEC    | 47000 | mg/m3   | Rat      | OECD 453 (Combined Chronic Toxicity/Carcinogenicity Studies)                                | Negative  |
| Reproductive toxicity:  | NOAEL    | 5000  | ppm     | Rat      | OECD 414 (Prenatal Developmental Toxicity Study)  |   |
| Specific target organ toxicity - repeated exposure (STOT-RE): | NOAEC    | 47106 | mg/kg   | Rat      | OECD 452 (Chronic Toxicity Studies)   | Negative(2 a)   |
| Aspiration hazard:  |          |       |         |          |   | No  |
| Symptoms:   |          |       |         |          |   | unconsciousness, headaches, mucous membrane irritation, dizziness, nausea and vomiting., frostbite, gastrointestinal disturbances, respiratory distress, circulatory collapse |

| Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics |          |       |       |          |                                  |                      |
|--|----------|-------|-------|----------|----------------------------------|----------------------|
| Toxicity / effect                                | Endpoint | Value | Unit  | Organism | Test method                      | Notes                |
| Acute toxicity, by oral route:                   | LD50     | >5840 | mg/kg | Rat      | OECD 401 (Acute Oral Toxicity)   | Analogous conclusion |
| Acute toxicity, by dermal route:                 | LD50     | >2920 | mg/kg | Rat      | OECD 402 (Acute Dermal Toxicity) | Analogous conclusion |

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|------------------------------------|-------|-------|---------|------------|---|---|
| Acute toxicity, by inhalation:     | LC50  | >23,3 | mg/l/4h | Rat        | OECD 403 (Acute Inhalation Toxicity)                  | Analogous conclusion  |
| Skin corrosion/irritation:         |       |       |         | Rabbit     | OECD 404 (Acute Dermal Irritation/Corrosion)          | Irritant  |
| Serious eye damage/irritation:     |       |       |         | Rabbit     |   | Not irritant  |
| Respiratory or skin sensitisation: |       |       |         | Guinea pig | OECD 406 (Skin Sensitisation)                         | No (skin contact)   |
| Germ cell mutagenicity:            |       |       |         |            | OECD 476 (In Vitro Mammalian Cell Gene Mutation Test) | Negative  |
| Carcinogenicity:                   |       |       |         |            |   | Negative  |
| Reproductive toxicity:             | NOAEL | 9000  | ppm     | Rat        | OECD 416 (Two-generation Reproduction Toxicity Study) | Negative  |
| Aspiration hazard:                 |       |       |         |            |   | Yes   |
| Symptoms:                          |       |       |         |            |   | diarrhoea, headaches, dizziness, nausea and vomiting.   |
| Symptoms:                          |       |       |         |            |   | drowsiness, unconsciousness, heart/circulatory disorders, headaches, cramps, drowsiness, mucous membrane irritation, dizziness, nausea and vomiting., diarrhoea |

| Ethyl acetate                      |          |        |         |                        |  |   |
|------------------------------------|----------|--------|---------|------------------------|--|---|
| Toxicity / effect                  | Endpoint | Value  | Unit    | Organism               | Test method  | Notes   |
| Acute toxicity, by oral route:     | LD50     | 4934   | mg/kg   | Rabbit                 | OECD 401 (Acute Oral Toxicity)                           |   |
| Acute toxicity, by dermal route:   | LD50     | >20000 | mg/kg   | Rabbit                 |  |   |
| Acute toxicity, by inhalation:     | LC0      | 29,3   | mg/l/4h | Rat                    |  | Vapours   |
| Skin corrosion/irritation:         |          | 24     | h       | Rabbit                 |  | Not irritant, Repeated exposure may cause skin dryness or cracking. |
| 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:            |          |        |         | Mammalian              | OECD 473 (In Vitro Mammalian Chromosome Aberration Test) | Negative  |
| Germ cell mutagenicity:            |          |        |         | Mammalian              | OECD 474 (Mammalian Erythrocyte Micronucleus Test)       | Negative  |
| Carcinogenicity:                   |          |        |         |                        |  | Negative  |

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|---|-------|-------|------------|-----|---|---|
| Reproductive toxicity:  |       |       |            |     |   | Negative  |
| Aspiration hazard:  |       |       |            |     |   | No  |
| Symptoms:   |       |       |            |     |   | lack of appetite,<br>breathing difficulties,<br>drowsiness,<br>unconsciousness<br>, drop in blood pressure, cornea opacity,<br>coughing,<br>headaches,<br>gastrointestinal disturbances,<br>intoxication,<br>drowsiness,<br>mucous membrane irritation,<br>dizziness,<br>salivation,<br>nausea and vomiting., fatigue |
| Specific target organ toxicity - repeated exposure (STOT-RE), oral:     | NOAEL | 900   | mg/kg bw/d | Rat | Regulation (EC) 440/2008 B.26 (SUB-CHRONIC ORAL TOXICITY TEST REPEATED DOSE 90 - DAY (RODENTS)) |   |
| Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.: | NOAEL | 0,002 | mg/kg      | Rat | Regulation (EC) 440/2008 B.29 (SUB-CHRONIC INHALATION TOXICITY STUDY 90-DAY REPEATED (RODENTS)) |   |

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|------------------------------------|-----------------|--------------|-------------|------------------------|---|--|
| <b>Toxicity / effect</b>           | <b>Endpoint</b> | <b>Value</b> | <b>Unit</b> | <b>Organism</b>        | <b>Test method</b>  | <b>Notes</b>   |
| Acute toxicity, by oral route:     | LD50            | >2000        | mg/kg       | Rat                    | OECD 423 (Acute Oral Toxicity - Acute Toxic Class Method) |  |
| Acute toxicity, by dermal route:   | LD50            | 5000         | mg/kg       | Rabbit                 | OECD 402 (Acute Dermal Toxicity)                          |  |
| Acute toxicity, by inhalation:     | LC50            | 34,5         | mg/l/4h     | Rat                    |   |  |
| Skin corrosion/irritation:         |                 |              |             | Rabbit                 | OECD 404 (Acute Dermal Irritation/Corrosion)              | Mild irritant, Repeated exposure may cause skin dryness or cracking. |
| Serious eye damage/irritation:     |                 |              |             | Rabbit                 | OECD 405 (Acute Eye Irritation/Corrosion)                 | Eye Irrit. 2   |
| Respiratory or skin sensitisation: |                 |              |             | Guinea pig             | OECD 406 (Skin Sensitisation)                             | Not sensitising  |
| Germ cell mutagenicity:            |                 |              |             | Salmonella typhimurium | OECD 471 (Bacterial Reverse Mutation Test)                | Negative   |
| Germ cell mutagenicity:            |                 |              |             | Mouse                  | OECD 474 (Mammalian Erythrocyte Micronucleus Test)        | Negative   |
| Germ cell mutagenicity:            |                 |              |             | Mouse                  | OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)     | Negative   |



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|---|-------|------|----------|-----|--|--|
| Reproductive toxicity (Developmental toxicity):                         | NOAEC | 1002 | ppm      | Rat | OECD 414 (Prenatal Developmental Toxicity Study)         | Negative   |
| Symptoms:   |       |      |          |     |  | respiratory distress, drowsiness, unconsciousness, drop in blood pressure, coughing, headaches, cramps, intoxication, drowsiness, mucous membrane irritation, dizziness, nausea and vomiting., mental confusion, fatigue |
| Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.: | NOAEC | 5041 | ppm/6h/d | Rat | OECD 413 (Subchronic Inhalation Toxicity - 90-Day Study) | Vapours, Negative  |

**Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics**

| Toxicity / effect                  | Endpoint | Value | Unit    | Organism   | Test method  | Notes   |
|------------------------------------|----------|-------|---------|------------|--|---|
| Acute toxicity, by oral route:     | LD50     | >5000 | mg/kg   | Rat        | OECD 401 (Acute Oral Toxicity)                           |   |
| Acute toxicity, by dermal route:   | LD50     | >2800 | mg/kg   | Rabbit     | OECD 402 (Acute Dermal Toxicity)                         |   |
| Acute toxicity, by dermal route:   | LD50     | >2000 | mg/kg   | Rabbit     | OECD 402 (Acute Dermal Toxicity)                         |   |
| Acute toxicity, by inhalation:     | LC50     | >23,3 | mg/l/4h | Rat        | OECD 403 (Acute Inhalation Toxicity)                     | Vapours   |
| Skin corrosion/irritation:         |          |       |         | Rabbit     | OECD 404 (Acute Dermal Irritation/Corrosion)             | Not irritant  |
| Skin corrosion/irritation:         |          |       |         |            |  | Repeated exposure may cause skin dryness or cracking. |
| Serious eye damage/irritation:     |          |       |         | Rabbit     | OECD 405 (Acute Eye Irritation/Corrosion)                | Not irritant  |
| Respiratory or skin sensitisation: |          |       |         | Guinea pig | OECD 406 (Skin Sensitisation)                            | Not sensitizing                                       |
| Germ cell mutagenicity:            |          |       |         |            | OECD 473 (In Vitro Mammalian Chromosome Aberration Test) | Negative  |
| Germ cell mutagenicity:            |          | 2000  | mg/kg   | Mouse      | OECD 474 (Mammalian Erythrocyte Micronucleus Test)       | Negative  |
| Germ cell mutagenicity:            |          |       |         |            | OECD 471 (Bacterial Reverse Mutation Test)               | Negative  |
| Reproductive toxicity:             |          |       |         |            | OECD 414 (Prenatal Developmental Toxicity Study)         | Negative  |
| Reproductive toxicity:             | LOAEL    | 9000  | ppm     | Rat        | OECD 416 (Two-generation Reproduction Toxicity Study)    | Negative  |

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|   |  |  |  |  |  |  |
|---|--|--|--|--|--|--|
| Specific target organ toxicity - single exposure (STOT-SE):   |  |  |  |  |  | STOT SE 3, H336  |
| Specific target organ toxicity - repeated exposure (STOT-RE): |  |  |  |  | OECD 413 (Subchronic Inhalation Toxicity - 90-Day Study) | Negative   |
| Aspiration hazard:  |  |  |  |  |  | Yes  |
| Symptoms:   |  |  |  |  |  | drowsiness, unconsciousness, heart/circulatory disorders, headaches, cramps, drowsiness, mucous membrane irritation, dizziness, nausea and vomiting. |

**Cyclohexane**

| Toxicity / effect   | Endpoint | Value | Unit    | Organism   | Test method                                  | Notes  |
|---|----------|-------|---------|------------|--|--|
| Acute toxicity, by oral route:                              | LD50     | >2000 | mg/kg   | Rat        | OECD 401 (Acute Oral Toxicity)               |  |
| Acute toxicity, by dermal route:                            | LD50     | >2000 | mg/kg   | Rabbit     | OECD 402 (Acute Dermal Toxicity)             |  |
| Acute toxicity, by inhalation:                              | LC50     | 14    | mg/l/4h | Rat        |  | Aerosol  |
| Skin corrosion/irritation:                                  |          |       |         | Rabbit     | OECD 404 (Acute Dermal Irritation/Corrosion) | Irritant   |
| Serious eye damage/irritation:                              |          |       |         | Rabbit     | OECD 405 (Acute Eye Irritation/Corrosion)    | Mild irritant  |
| Respiratory or skin sensitisation:                          |          |       |         | Guinea pig |  | Not sensitising  |
| Germ cell mutagenicity:                                     |          |       |         |            |  | Negative   |
| Specific target organ toxicity - single exposure (STOT-SE): | LOAEL    | 0,09  | mg/l    |            |  | May cause drowsiness or dizziness.   |
| Aspiration hazard:  |          |       |         |            |  | Yes  |
| Symptoms:   |          |       |         |            |  | lack of appetite, abdominal pain, drowsiness, unconsciousness, coughing, collapse, headaches, cramps, gastrointestinal disturbances, drowsiness, mucous membrane irritation, dizziness, nausea and vomiting. |

**Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane**

| Toxicity / effect                | Endpoint | Value | Unit  | Organism | Test method                      | Notes                |
|----------------------------------|----------|-------|-------|----------|----------------------------------|----------------------|
| Acute toxicity, by oral route:   | LD50     | >5840 | mg/kg | Rat      | OECD 401 (Acute Oral Toxicity)   | Analogous conclusion |
| Acute toxicity, by dermal route: | LD50     | >2920 | mg/kg | Rabbit   | OECD 402 (Acute Dermal Toxicity) | Analogous conclusion |

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|   |      |       |         |     |  |  |
|---|------|-------|---------|-----|--|--|
| Acute toxicity, by inhalation:  | LC50 | >25,2 | mg/l/4h | Rat | OECD 403 (Acute Inhalation Toxicity)             | Vapours  |
| Skin corrosion/irritation:  |      |       |         |     | OECD 404 (Acute Dermal Irritation/Corrosion)     | Irritant   |
| Serious eye damage/irritation:  |      |       |         |     | OECD 405 (Acute Eye Irritation/Corrosion)        | Mild irritant (Analogous conclusion)   |
| Respiratory or skin sensitisation:                                      |      |       |         |     | OECD 406 (Skin Sensitisation)                    | Analogous conclusion, No (inhalation and skin contact)   |
| Germ cell mutagenicity:   |      |       |         |     | OECD 471 (Bacterial Reverse Mutation Test)       | Analogous conclusion, Negative   |
| Carcinogenicity:  |      |       |         |     |  | Analogous conclusion, Negative   |
| Reproductive toxicity:  |      |       |         |     | OECD 414 (Prenatal Developmental Toxicity Study) | Analogous conclusion, Negative   |
| Specific target organ toxicity - single exposure (STOT-SE):             |      |       |         |     |  | May cause drowsiness or dizziness.   |
| Specific target organ toxicity - repeated exposure (STOT-RE):           |      |       |         |     |  | Negative   |
| Aspiration hazard:  |      |       |         |     |  | Yes  |
| Symptoms:   |      |       |         |     |  | drowsiness, unconsciousness, heart/circulatory disorders, headaches, cramps, drowsiness, mucous membrane irritation, dizziness, nausea and vomiting. |
| Specific target organ toxicity - single exposure (STOT-SE), inhalative: |      |       |         |     |  | Not irritant (respiratory tract).  |

**Hydrocarbons, C9, aromatics**

| Toxicity / effect                | Endpoint | Value  | Unit    | Organism | Test method                                  | Notes   |
|----------------------------------|----------|--------|---------|----------|--|---|
| Acute toxicity, by oral route:   | LD50     | 3492   | mg/kg   | Rat      | OECD 401 (Acute Oral Toxicity)               |   |
| Acute toxicity, by dermal route: | LD50     | >3160  | mg/kg   | Rabbit   | OECD 402 (Acute Dermal Toxicity)             |   |
| Acute toxicity, by inhalation:   | LC50     | >5,693 | mg/l/4h | Rat      | OECD 403 (Acute Inhalation Toxicity)         | Analogous conclusion                                  |
| Skin corrosion/irritation:       |          |        |         |          |  | Repeated exposure may cause skin dryness or cracking. |
| Skin corrosion/irritation:       |          |        |         | Rabbit   | OECD 404 (Acute Dermal Irritation/Corrosion) | Not irritant  |
| Serious eye damage/irritation:   |          |        |         | Rabbit   | OECD 405 (Acute Eye Irritation/Corrosion)    | Not irritant  |

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|   |  |  |  |            |   |  |
|---|--|--|--|------------|---|--|
| Respiratory or skin sensitisation:                            |  |  |  | Guinea pig | OECD 406 (Skin Sensitisation)   | No (skin contact)  |
| Germ cell mutagenicity:                                       |  |  |  |            | OECD 471 (Bacterial Reverse Mutation Test)  | Negative   |
| Germ cell mutagenicity:                                       |  |  |  |            | OECD 475 (Mammalian Bone Marrow Chromosome Aberration Test)                                 | Negative   |
| Germ cell mutagenicity:                                       |  |  |  |            | OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)                                       | Negative   |
| Germ cell mutagenicity:                                       |  |  |  |            | OECD 479 (Genetic Toxicology - In Vitro Sister Chromatid Exchange assay in Mammalian Cells) | Negative   |
| Carcinogenicity:  |  |  |  |            |   | Negative   |
| Reproductive toxicity:  |  |  |  | Rat        | OECD 421 (Reproduction/Developmental Toxicity Screening Test)                               | Negative   |
| Reproductive toxicity:  |  |  |  |            | OECD 414 (Prenatal Developmental Toxicity Study)  | Negative   |
| Reproductive toxicity:  |  |  |  |            | OECD 416 (Two-generation Reproduction Toxicity Study)                                       | Negative   |
| Specific target organ toxicity - single exposure (STOT-SE):   |  |  |  |            |   | STOT SE 3, H335, STOT SE 3, H336   |
| Specific target organ toxicity - repeated exposure (STOT-RE): |  |  |  |            | OECD 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)                              | Negative   |
| Specific target organ toxicity - repeated exposure (STOT-RE): |  |  |  |            | OECD 452 (Chronic Toxicity Studies)   | Negative   |
| Aspiration hazard:  |  |  |  |            |   | Yes  |
| Symptoms:   |  |  |  |            |   | respiratory distress, coughing, burning of the membranes of the nose and throat, drowsiness, dizziness, headaches, nausea, unconsciousness, fever, ear noises, drying of the skin. |

| Talc                               |          |       |       |          |  |                 |
|------------------------------------|----------|-------|-------|----------|--|-----------------|
| Toxicity / effect                  | Endpoint | Value | Unit  | Organism | Test method                                  | Notes           |
| Acute toxicity, by oral route:     | LD50     | >5000 | mg/kg | Rat      |  |                 |
| Acute toxicity, by dermal route:   | LD50     | >2000 | mg/kg | Rat      |  |                 |
| Skin corrosion/irritation:         |          |       |       | Rabbit   | OECD 404 (Acute Dermal Irritation/Corrosion) | Not irritant    |
| Skin corrosion/irritation:         |          |       |       |          |  | Not irritant    |
| Respiratory or skin sensitisation: |          |       |       |          |  | Not sensitizing |

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|                         |  |  |  |     |  |                            |
|-------------------------|--|--|--|-----|--|----------------------------|
| Germ cell mutagenicity: |  |  |  |     | OECD 471 (Bacterial Reverse Mutation Test) | Negative                   |
| Carcinogenicity:        |  |  |  |     |  | Negative                   |
| Reproductive toxicity:  |  |  |  | Rat |  | Negative                   |
| Symptoms:               |  |  |  |     |  | mucous membrane irritation |

## SECTION 12: Ecological information

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

| Steinschlagschutz grau                   |          |      |       |      |          |             |   |
|--|----------|------|-------|------|----------|-------------|---|
| 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:                       | AOX      |      | 0     | %    |          |             | Does not contain any organically bound halogens which can contribute to the AOX value in waste water. |
| Other information:                       |          |      |       |      |          |             | DOC-elimination degree (complexing organic substance) $\geq$ 80%/28d: n.a.                            |

| Dimethyl ether                           |           |      |       |           |                     |  |   |
|--|-----------|------|-------|-----------|---------------------|--|---|
| Toxicity / effect                        | Endpoint  | Time | Value | Unit      | Organism            | Test method  | Notes   |
| 12.1. Toxicity to fish:                  | LC0       | 96h  | 2695  | mg/l      | Pimephales promelas |  |   |
| 12.1. Toxicity to fish:                  | LC50      | 96h  | 3082  | mg/l      | Salmo gairdneri     |  |   |
| 12.1. Toxicity to fish:                  | LC50      | 96h  | >4,1  | mg/l      | Poecilia reticulata |  |   |
| 12.1. Toxicity to daphnia:               | EC50      | 48h  | >4,4  | mg/l      | Daphnia magna       |  |   |
| 12.1. Toxicity to algae:                 | EC50      | 96h  | 154,9 | mg/l      | Chlorella vulgaris  |  |   |
| 12.2. Persistence and degradability:     |           | 28d  | 5     | %         |                     | OECD 301 D (Ready Biodegradability - Closed Bottle Test) | Not readily biodegradable                             |
| 12.3. Bioaccumulative potential:         | Log Pow   |      | -0,07 |           |                     |  | Bioaccumulation is unlikely (LogPow < 1). 25°C (pH 7) |
| 12.4. Mobility in soil:                  | H (Henry) |      | 518,6 | Pa*m3/mol |                     |  | No adsorption in soil.                                |
| 12.5. Results of PBT and vPvB assessment |           |      |       |           |                     |  | No PBT substance, No vPvB substance                   |
| Toxicity to bacteria:                    | EC10      |      | >1600 | mg/l      | Pseudomonas putida  |  |   |

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|                    |  |  |       |      |  |  |   |
|--------------------|--|--|-------|------|--|--|---|
| Other information: |  |  |       |      |  |  | Does not contain any organically bound halogens which can contribute to the AOX value in waste water. DIN EN 1485 |
| Water solubility:  |  |  | 45,60 | mg/l |  |  | 25°C  |

| Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics |          |      |         |      |                                 |  |                       |
|--|----------|------|---------|------|---------------------------------|--|-----------------------|
| Toxicity / effect                                | Endpoint | Time | Value   | Unit | Organism                        | Test method  | Notes                 |
| 12.1. Toxicity to fish:                          | LC50     | 96h  | 13,4    | mg/l | Oncorhynchus mykiss             |  |                       |
| 12.1. Toxicity to fish:                          | LL50     | 96h  | >13,4   | mg/l | Oncorhynchus mykiss             | OECD 203 (Fish, Acute Toxicity Test)                               |                       |
| 12.1. Toxicity to fish:                          | NOELR    | 28d  | 1,53    | mg/l | Oncorhynchus mykiss             | QSAR   |                       |
| 12.1. Toxicity to daphnia:                       | NOELR    | 21d  | 1       | mg/l | Daphnia magna                   | OECD 211 (Daphnia magna Reproduction Test)                         |                       |
| 12.1. Toxicity to algae:                         | EC50     | 72h  | 10 - 30 | mg/l | Pseudokirchneriella subcapitata |  |                       |
| 12.1. Toxicity to algae:                         | NOELR    | 72h  | 10      | mg/l | Pseudokirchneriella subcapitata |  |                       |
| 12.1. Toxicity to algae:                         | ErL50    | 72h  | 10-30   | mg/l | Pseudokirchneriella subcapitata | OECD 201 (Alga, Growth Inhibition Test)                            |                       |
| 12.1. Toxicity to algae:                         | NOELR    | 72h  | 6,3     | mg/l | Pseudokirchneriella subcapitata | OECD 201 (Alga, Growth Inhibition Test)                            |                       |
| 12.2. Persistence and degradability:             |          | 28d  | 98      | %    |                                 | OECD 301 F (Ready Biodegradability - Manometric Respirometry Test) | Readily biodegradable |
| Water solubility:                                |          |      | 2,6     | mg/l |                                 |  | 25°C                  |

| Ethyl acetate              |           |      |       |      |                                 |  |                   |
|----------------------------|-----------|------|-------|------|---------------------------------|--|-------------------|
| Toxicity / effect          | Endpoint  | Time | Value | Unit | Organism                        | Test method                                | Notes             |
| 12.1. Toxicity to fish:    | NOEC/NOEL | 32d  | >9,65 | mg/l | Pimephales promelas             |  |                   |
| 12.1. Toxicity to fish:    | LC50      | 96h  | 230   | mg/l | Pimephales promelas             |  |                   |
| 12.1. Toxicity to daphnia: | EC50      | 48h  | 610   | mg/l | Daphnia magna                   | DIN 38412 T.11                             |                   |
| 12.1. Toxicity to daphnia: | NOEC/NOEL | 21d  | 2,4   | mg/l | Daphnia magna                   | OECD 211 (Daphnia magna Reproduction Test) |                   |
| 12.1. Toxicity to daphnia: | EC50      | 48h  | 165   | mg/l |                                 |  | Daphnia cucullata |
| 12.1. Toxicity to algae:   | EC50      | 48h  | 5600  | mg/l | Desmodesmus subspicatus         | DIN 38412 T.9                              |                   |
| 12.1. Toxicity to algae:   | NOEC/NOEL | 96h  | 2000  | mg/l | Scenedesmus subspicatus         | OECD 201 (Alga, Growth Inhibition Test)    |                   |
| 12.1. Toxicity to algae:   | EC50      | 96h  | >2000 | mg/l | Pseudokirchneriella subcapitata | OECD 201 (Alga, Growth Inhibition Test)    |                   |
| 12.1. Toxicity to algae:   | NOEC/NOEL | 72h  | >100  | mg/l | Desmodesmus subspicatus         | OECD 201 (Alga, Growth Inhibition Test)    |                   |

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|  |           |       |         |            |                            |   |  |
|--|-----------|-------|---------|------------|----------------------------|---|--|
| 12.2. Persistence and degradability:     |           | 20d   | 79      | %          |                            | OECD 301 D (Ready Biodegradability - Closed Bottle Test)                | Readily biodegradable                          |
| 12.3. Bioaccumulative potential:         | BCF       | 72h   | 30      |            |                            |   | (Fish)   |
| 12.3. Bioaccumulative potential:         | Log Kow   |       | 0,68    |            |                            | OECD 107 (Partition Coefficient (n-octanol/water) - Shake Flask Method) | Bioaccumulation is unlikely (LogPow < 1).25 °C |
| 12.4. Mobility in soil:                  | H (Henry) |       | 0,00012 | atm*m3/mol |                            |   |  |
| 12.4. Mobility in soil:                  | Koc       |       | 3       |            |                            |   |  |
| 12.5. Results of PBT and vPvB assessment |           |       |         |            |                            |   | No PBT substance, No vPvB substance            |
| Toxicity to bacteria:                    | EC10      | 16h   | 2900    | mg/l       | Escherichia coli           |   |  |
| Toxicity to bacteria:                    | EC50      | 15min | 5870    | mg/l       | Photobacterium phosphoreum |   |  |

| Butanone                                 |           |      |           |            |                                 |  |   |
|--|-----------|------|-----------|------------|---------------------------------|--|---|
| Toxicity / effect                        | Endpoint  | Time | Value     | Unit       | Organism                        | Test method  | Notes                                     |
| 12.5. Results of PBT and vPvB assessment |           |      |           |            |                                 |  | No vPvB substance, No PBT substance       |
| 12.1. Toxicity to fish:                  | LC50      | 96h  | 1690      | mg/l       | Lepomis macrochirus             |  |   |
| 12.1. Toxicity to fish:                  | LC50      | 96h  | 2993      | mg/l       | Pimephales promelas             | OECD 203 (Fish, Acute Toxicity Test)                             |   |
| 12.1. Toxicity to daphnia:               | EC50      | 48h  | 308       | mg/l       | Daphnia magna                   | OECD 202 (Daphnia sp. Acute Immobilisation Test)                 |   |
| 12.1. Toxicity to algae:                 | LC50      | 72h  | 1972      | mg/l       | Pseudokirchneriella subcapitata | OECD 201 (Alga, Growth Inhibition Test)                          |   |
| 12.2. Persistence and degradability:     |           | 28d  | 98        | %          |                                 | OECD 301 D (Ready Biodegradability - Closed Bottle Test)         | Readily biodegradable                     |
| 12.3. Bioaccumulative potential:         | Log Pow   |      | 0,29      |            |                                 | OECD 117 (Partition Coefficient (n-octanol/water) - HPLC method) | Bioaccumulation is unlikely (LogPow < 1). |
| 12.4. Mobility in soil:                  | H (Henry) |      | 0,0000244 | atm*m3/mol |                                 |  | 25°C                                      |
| Other information:                       | DOC       |      | >70       | %          |                                 |  |   |
| Other information:                       | BOD/COD   |      | >50       | %          |                                 |  |   |

| Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics |          |      |        |      |                     |                                      |                                      |
|---|----------|------|--------|------|---------------------|--------------------------------------|--------------------------------------|
| Toxicity / effect                                   | Endpoint | Time | Value  | Unit | Organism            | Test method                          | Notes                                |
| 12.6. Other adverse effects:                        |          |      |        |      |                     |                                      | Product floats on the water surface. |
| 12.1. Toxicity to fish:                             | NOELR    | 28d  | 0,574  |      | Oncorhynchus mykiss |                                      |                                      |
| 12.1. Toxicity to fish:                             | LC50     | 96h  | 3 - 10 | mg/l | Oncorhynchus mykiss | OECD 203 (Fish, Acute Toxicity Test) |                                      |



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|  |           |     |          |      |                                 |  |  |
|--|-----------|-----|----------|------|---------------------------------|--|--|
| 12.1. Toxicity to daphnia:               | EL50      | 48h | 4,6 - 10 | mg/l | Daphnia magna                   | OECD 202 (Daphnia sp. Acute Immobilisation Test)                   |  |
| 12.1. Toxicity to daphnia:               | NOELR     | 21d | 1 -1,6   | mg/l | Daphnia magna                   | OECD 211 (Daphnia magna Reproduction Test)                         |  |
| 12.1. Toxicity to algae:                 | NOEC/NOEL | 72h | 10       | mg/l | Pseudokirchneriella subcapitata | OECD 201 (Alga, Growth Inhibition Test)                            |  |
| 12.1. Toxicity to algae:                 | EL50      | 72h | 10       | mg/l | Pseudokirchneriella subcapitata | OECD 201 (Alga, Growth Inhibition Test)                            |  |
| 12.2. Persistence and degradability:     |           | 28d | 98       | %    |                                 | OECD 301 F (Ready Biodegradability - Manometric Respirometry Test) | Completely biodegradable.                            |
| 12.5. Results of PBT and vPvB assessment |           |     |          |      |                                 |  | No PBT substance, No vPvB substance calculated value |
| Toxicity to bacteria:                    | EL50      | 48h | 11,14    | mg/l |                                 |  |  |

#### Cyclohexane

| Toxicity / effect                    | Endpoint | Time | Value | Unit | Organism                   | Test method  | Notes  |
|--------------------------------------|----------|------|-------|------|----------------------------|--|--|
| 12.1. Toxicity to fish:              | LC50     | 96h  | 4,53  | mg/l | Pimephales promelas        | OECD 203 (Fish, Acute Toxicity Test)                               |  |
| 12.1. Toxicity to daphnia:           | EC50     | 48h  | 0,9   | mg/l | Daphnia magna              | OECD 202 (Daphnia sp. Acute Immobilisation Test)                   |  |
| 12.1. Toxicity to algae:             | LC50     | 72h  | 9,317 | mg/l | Chlorella vulgaris         |  |  |
| 12.2. Persistence and degradability: |          | 28d  | 77    | %    |                            | OECD 301 F (Ready Biodegradability - Manometric Respirometry Test) |  |
| 12.2. Persistence and degradability: | DOC      | 28d  | 9     | %    |                            |  | Not readily biodegradable  |
| 12.3. Bioaccumulative potential:     | Log Pow  |      | 3,44  |      |                            |  | A notable biological accumulation potential has to be expected (LogPow > 3). |
| Toxicity to bacteria:                | EC50     | 5min | 200   | mg/l | Photobacterium phosphoreum |  |  |

#### Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane

| Toxicity / effect          | Endpoint  | Time | Value | Unit | Organism            | Test method                                | Notes                |
|----------------------------|-----------|------|-------|------|---------------------|--|----------------------|
| 12.1. Toxicity to fish:    | LL50      | 96h  | 11,4  | mg/l | Oncorhynchus mykiss | OECD 203 (Fish, Acute Toxicity Test)       | Analogous conclusion |
| 12.1. Toxicity to fish:    | NOEC/NOEL | 28d  | 2,045 | mg/l | Oncorhynchus mykiss | QSAR                                       |                      |
| 12.1. Toxicity to daphnia: | NOEC/NOEL | 21d  | 0,17  | mg/l | Daphnia magna       | OECD 211 (Daphnia magna Reproduction Test) |                      |

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|  |      |     |        |      |                                 |  |   |
|--|------|-----|--------|------|---------------------------------|--|---|
| 12.1. Toxicity to daphnia:               | EL50 | 48h | 3      | mg/l | Daphnia magna                   | OECD 202 (Daphnia sp. Acute Immobilisation Test)                   | Analogous conclusion                        |
| 12.2. Persistence and degradability:     |      | 28d | 81     | %    | activated sludge                | OECD 301 F (Ready Biodegradability - Manometric Respirometry Test) | Analogous conclusion, Readily biodegradable |
| 12.1. Toxicity to algae:                 | EL50 | 72h | 30-100 | mg/l | Pseudokirchneriella subcapitata | OECD 201 (Alga, Growth Inhibition Test)                            | Analogous conclusion                        |
| 12.5. Results of PBT and vPvB assessment |      |     |        |      |                                 |  | No PBT substance, No vPvB substance         |

#### Hydrocarbons, C9, aromatics

| Toxicity / effect                        | Endpoint | Time | Value     | Unit | Organism                        | Test method  | Notes                               |
|--|----------|------|-----------|------|---------------------------------|--|-------------------------------------|
| 12.1. Toxicity to fish:                  | LC50     | 96h  | 9,2       | mg/l | Oncorhynchus mykiss             | OECD 203 (Fish, Acute Toxicity Test)                               |                                     |
| 12.1. Toxicity to daphnia:               | EC50     | 48h  | 3,2       | mg/l | Daphnia magna                   | OECD 202 (Daphnia sp. Acute Immobilisation Test)                   |                                     |
| 12.1. Toxicity to algae:                 | ErL50    | 72h  | 2,9       | mg/l | Pseudokirchneriella subcapitata | OECD 201 (Alga, Growth Inhibition Test)                            |                                     |
| 12.2. Persistence and degradability:     |          | 28d  | 54-56     | %    |                                 | OECD 301 B (Ready Biodegradability - Co2 Evolution Test)           |                                     |
| 12.2. Persistence and degradability:     |          | 28d  | 78        | %    |                                 | OECD 301 E (Ready Biodegradability - Modified OECD Screening Test) | Readily biodegradable               |
| 12.2. Persistence and degradability:     |          | 28d  | 78        | %    |                                 | OECD 301 F (Ready Biodegradability - Manometric Respirometry Test) |                                     |
| 12.3. Bioaccumulative potential:         | Log Pow  |      | 3,7 - 4,5 |      |                                 |  |                                     |
| 12.5. Results of PBT and vPvB assessment |          |      |           |      |                                 |  | No PBT substance, No vPvB substance |

#### Talc

| Toxicity / effect                        | Endpoint | Time | Value | Unit | Organism | Test method | Notes                                  |
|--|----------|------|-------|------|----------|-------------|--|
| Water solubility:                        |          |      | <0,1  | %    |          |             |  |
| 12.2. Persistence and degradability:     |          |      |       |      |          |             | Not relevant for inorganic substances. |
| 12.5. Results of PBT and vPvB assessment |          |      |       |      |          |             | No PBT substance, No vPvB substance    |

### SECTION 13: Disposal considerations

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### 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)

16 05 04 gases in pressure containers (including halons) containing hazardous substances

08 01 11 waste paint and varnish containing organic solvents or other hazardous substances

Recommendation:

Sewage disposal shall be discouraged.

Pay attention to local and national official regulations.

Take full aerosol cans to problem waste collection.

Take emptied aerosol cans to valuable material collection.

#### For contaminated packing material

Pay attention to local and national official regulations.

Do not perforate, cut up or weld uncleaned container.

## SECTION 14: Transport information

### General statements

14.1. UN number: 1950

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

14.2. UN proper shipping name:

UN 1950 AEROSOLS

14.3. Transport hazard class(es): 2.1

14.4. Packing group: -

Classification code: 5F

LQ: 1 L

14.5. Environmental hazards: environmentally hazardous

Tunnel restriction code: D



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

14.2. UN proper shipping name:

AEROSOLS (NAPHTHA (PETROLEUM),HYDROCARBONS, C6-C7)

14.3. Transport hazard class(es): 2.1

14.4. Packing group: -

EmS: F-D, S-U

Marine Pollutant: Yes

14.5. Environmental hazards: environmentally hazardous



#### Transport by air (IATA)

14.2. UN proper shipping name:

Aerosols, flammable

14.3. Transport hazard class(es): 2.1

14.4. Packing group: -

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

Freight 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:

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Comply with national regulations/laws governing the protection of young people at work (national implementation of the Directive 94/33/EC)!  
 Regulation (EC) No 1907/2006, Annex XVII  
 Cyclohexane  
 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 |
|-------------------|------------------|---|---|
| E2                |                  | 200   | 500   |
| P3a               | 11.1             | 150 (netto)   | 500 (netto)   |

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): 74,98 %

Observe incident regulations.

## 15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

## SECTION 16: Other information

Revised sections: 2, 3, 8, 9, 11, 12, 14, 15, 16  
 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):

| Classification in accordance with regulation (EC) No. 1272/2008 (CLP) | Evaluation method used                              |
|---|---|
| Eye Irrit. 2, H319  | Classification according to calculation procedure.  |
| Skin Irrit. 2, H315   | Classification according to calculation procedure.  |
| Asp. Tox. 1, H304   | Classification according to calculation procedure.  |
| STOT SE 3, H336   | Classification according to calculation procedure.  |
| Aquatic Chronic 2, H411   | Classification according to calculation procedure.  |
| Aerosol 1, H222   | Classification according to calculation procedure.  |
| Aerosol 1, H229   | Classification based on the form or physical state. |

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.  
 H226 Flammable liquid and vapour.  
 H304 May be fatal if swallowed and enters airways.  
 H315 Causes skin irritation.  
 H319 Causes serious eye irritation.  
 H335 May cause respiratory irritation.  
 H336 May cause drowsiness or dizziness.  
 H400 Very toxic to aquatic life.  
 H410 Very toxic to aquatic life with long lasting effects.  
 H411 Toxic to aquatic life with long lasting effects.  
 H220 Extremely flammable gas.

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Eye Irrit. — Eye irritation  
 Skin Irrit. — Skin irritation  
 Asp. Tox. — Aspiration hazard  
 STOT SE — Specific target organ toxicity - single exposure - narcotic effects  
 Aquatic Chronic — Hazardous to the aquatic environment - chronic  
 Aerosol — Aerosols  
 Flam. Gas — Flammable gases - Flammable gas  
 Flam. Liq. — Flammable liquid  
 Aquatic Acute — Hazardous to the aquatic environment - acute  
 STOT SE — Specific target organ toxicity - single exposure - respiratory tract irritation

### 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)  
 ATE Acute Toxicity Estimate  
 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  
 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  
 IUPAC International Union for Pure Applied Chemistry  
 LC50 Lethal Concentration to 50 % of a test population  
 LD50 Lethal Dose to 50% of a test population (Median Lethal Dose)  
 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

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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:

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