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Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
Revision date / version: 31.07.2018 / 0015  
Replacing version dated / version: 05.07.2018 / 0014  
Valid from: 31.07.2018  
PDF print date: 01.08.2018  
Keramik-Schock-Rostloeser 300 mL  
Art.: 1641

## 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

**Keramik-Schock-Rostloeser 300 mL**

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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:**

Rust remover

Sector of use [SU]:

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

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

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

Chemical product category [PC]:

PC24 - Lubricants, greases, release products

PC35 - Washing and cleaning products

Process category [PROC]:

PROC 1 - Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.

PROC 2 - Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions

PROC 7 - Industrial spraying

PROC 8a - Transfer of substance or mixture (charging and discharging) at non-dedicated facilities

PROC 8b - Transfer of substance or mixture (charging and discharging) at dedicated facilities

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

PROC11 - Non industrial spraying

Article Categories [AC]:

AC99 - Not required.

Environmental Release Category [ERC]:

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

ERC 7 - Use of functional fluid at industrial site

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

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

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

No information available at present.

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

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LIQUI MOLY GmbH, Jerg-Wieland-Str. 4, 89081 Ulm-Lehr, Germany  
Phone:(+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

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

| Hazard class    | Hazard category | Hazard statement  |
|-----------------|-----------------|---|
| 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 | 3               | H412-Harmful 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)



Danger

H315-Causes skin irritation. H336-May cause drowsiness or dizziness. H412-Harmful 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. P251-Do not pierce or burn, even after use. P261-Avoid breathing vapours or spray. P271-Use only outdoors or in a well-ventilated area. P273-Avoid release to the environment. P280-Wear protective gloves.

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 special waste collection point.

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

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, &lt;5% n-hexane

## 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 (&lt; 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 (&lt; 0,1 %).

## SECTION 3: Composition/information on ingredients

Aerosol

### 3.1 Substance

n.a.

### 3.2 Mixture

|   |                               |
|---|-------------------------------|
| Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane |                               |
| Registration number (REACH)                                       | 01-2119475514-35-XXXX         |
| Index   | ---                           |
| EINECS, ELINCS, NLP   | 921-024-6 (REACH-IT List-No.) |
| CAS   | ---                           |

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|  |  |
|--|--|
| <b>content %</b>   | 10-<25   |
| <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 |

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

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

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

#### Inhalation

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

#### Skin contact

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.

The following may occur:

Irritation of the eyes  
 Irritation of the respiratory tract  
 Coughing  
 Headaches  
 Effects/damages the central nervous system

With long-term contact:  
 Dermatitis (skin inflammation)  
 Drying of the skin.

Other dangerous properties cannot be ruled out.  
 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

#### Suitable extinguishing media

Water jet spray/foam/CO2/dry extinguisher

#### Unsuitable extinguishing media

High volume water jet

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

In case of fire the following can develop:  
 Oxides of carbon

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Toxic gases  
Danger of bursting (explosion) when heated  
Explosive vapour/air or gas/air mixtures.  
Dangerous vapours heavier than air.  
In case of spreading near the ground, flashback to distance sources of ignition is possible.

### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes.  
Protective respirator with independent air supply.  
According to size of fire  
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

Prevent penetration into drains, cellars, working pits or other places in which accumulation could be hazardous.  
Prevent surface and ground-water infiltration, as well as ground penetration.  
If accidental entry into drainage system occurs, inform responsible authorities.

### 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) 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.  
Take measures against electrostatic charging, if appropriate.  
Do not use on hot surfaces.  
Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.  
Observe directions on label and instructions for use.  
Use working methods according to operating instructions.

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

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

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

Keep out of access to unauthorised individuals.  
Not to be stored in gangways or stair wells.  
Store product closed and only in original packing.  
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.

### 7.3 Specific end use(s)

No information available at present.

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## 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):  
 600 mg/m<sup>3</sup>

| Chemical Name                              | Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane |     | Content %:10-<br><25 |
|--|---|-----|----------------------|
| WEL-TWA: 600 mg/m <sup>3</sup>             | WEL-STEL: ---   | --- |                      |
| Monitoring procedures:                     | - Compur - KITA-187 S (551 174)                                   |     |                      |
| BMGV: ---                                  | Other information: (WEL acc. to RCP-method, EH40)                 |     |                      |
| Chemical Name                              | Butane  |     | Content %:           |
| WEL-TWA: 600 ppm (1450 mg/m <sup>3</sup> ) | WEL-STEL: 750 ppm (1810 mg/m <sup>3</sup> )                       | --- |                      |
| Monitoring procedures:                     | - Compur - KITA-221 SA (549 459)                                  |     |                      |
| BMGV: ---                                  | Other information: ---  |     |                      |
| Chemical Name                              | Propane   |     | Content %:           |
| WEL-TWA: 1000 ppm (ACGIH)                  | WEL-STEL: ---   | --- |                      |
| Monitoring procedures:                     | - Compur - KITA-125 SA (549 954)                                  |     |                      |
| BMGV: ---                                  | Other information: ---  |     |                      |
| Chemical Name                              | Isobutane   |     | Content %:           |
| WEL-TWA: 1000 ppm (EX) (ACGIH)             | WEL-STEL: ---   | --- |                      |
| Monitoring procedures:                     | - Compur - KITA-113 SB(C) (549 368)                               |     |                      |
| BMGV: ---                                  | Other information: ---  |     |                      |

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

### 8.2 Exposure controls

| 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       | 149   | mg/kg bw/day      |      |
| Consumer  | Human - inhalation                         | Long term, systemic effects | DNEL       | 608   | mg/m <sup>3</sup> |      |
| 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 - dermal                             | Long term, systemic effects | DNEL       | 300   | mg/kg bw/day      |      |
| Workers / employees   | Human - inhalation                         | Long term, systemic effects | DNEL       | 2035  | mg/m <sup>3</sup> |      |

#### 8.2.1 Appropriate engineering controls

Ensure good ventilation. This can be achieved by local suction or general air extraction.

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

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

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

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

Skin protection - Hand protection:  
 Protective nitrile gloves (EN 374)  
 Minimum layer thickness in mm:  
 >= 0,4  
 Permeation time (penetration time) in minutes:  
 >= 480  
 Protective hand cream recommended.  
 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.

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  
 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:                                  | Light, Beige                       |
| Odour:                                   | Odourless                          |
| Odour threshold:                         | Not determined                     |
| pH-value:                                | Not determined                     |
| Melting point/freezing point:            | Not determined                     |
| Initial boiling point and boiling range: | n.a.                               |
| Flash point:                             | Not determined                     |
| Evaporation rate:                        | n.a.                               |

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|  |   |
|--|---|
| Flammability (solid, gas):               | n.a.  |
| Lower explosive limit:                   | 0,6 Vol-%   |
| Upper explosive limit:                   | 10,9 Vol-%  |
| Vapour pressure:                         | 3800 hPa (20°C)   |
| Vapour density (air = 1):                | Not determined  |
| Density:                                 | 0,6 g/ml (20°C)   |
| Bulk density:                            | n.a.  |
| Solubility(ies):                         | Not determined  |
| Water solubility:                        | Not miscible  |
| Partition coefficient (n-octanol/water): | Not determined  |
| Auto-ignition temperature:               | 230 °C (Ignition temperature )  |
| Auto-ignition temperature:               | No  |
| Decomposition temperature:               | Not determined  |
| Viscosity:                               | Not determined  |
| Explosive properties:                    | Product is not explosive. Possible build up of explosive/highly flammable vapour/air mixture. |
| Oxidising properties:                    | No  |

## 9.2 Other information

|                           |                            |
|---------------------------|----------------------------|
| Miscibility:              | Not determined             |
| Fat solubility / solvent: | Not determined             |
| Conductivity:             | Not determined             |
| Surface tension:          | Not determined             |
| Solvents content:         | 98,1 % (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

Avoid contact with oxidizing agents.

### 10.6 Hazardous decomposition products

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. |
| 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. |

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|   |  |  |  |  |  |        |
|---|--|--|--|--|--|--------|
| Specific target organ toxicity - repeated exposure (STOT-RE): |  |  |  |  |  | n.d.a. |
| Aspiration hazard:  |  |  |  |  |  | n.d.a. |
| Symptoms:   |  |  |  |  |  | n.d.a. |

| 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     | >5000 | mg/kg   | Rat        | OECD 401 (Acute Oral Toxicity)                   |  |
| Acute toxicity, by dermal route:  | LD50     | >2000 | mg/kg   | Rat        | OECD 402 (Acute Dermal Toxicity)                 |  |
| Acute toxicity, by inhalation:  | LC50     | >25,2 | mg/l/4h | Rat        | OECD 403 (Acute Inhalation Toxicity)             | Vapours  |
| Skin corrosion/irritation:  |          |       |         | Rabbit     | OECD 404 (Acute Dermal Irritation/Corrosion)     | Irritant   |
| Serious eye damage/irritation:  |          |       |         | Rabbit     | OECD 405 (Acute Eye Irritation/Corrosion)        | Mild irritant (Analogous conclusion)   |
| Respiratory or skin sensitisation:                                      |          |       |         | Guinea pig | OECD 406 (Skin Sensitisation)                    | No (skin contact)  |
| Germ cell mutagenicity:   |          |       |         |            | OECD 471 (Bacterial Reverse Mutation Test)       | Analogous conclusion, Negative   |
| Carcinogenicity:  |          |       |         |            |  | 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).  |

| Butane                         |          |       |         |          |  |          |
|--------------------------------|----------|-------|---------|----------|--|----------|
| Toxicity / effect              | Endpoint | Value | Unit    | Organism | Test method                                | Notes    |
| Acute toxicity, by inhalation: | LC50     | 658   | mg/l/4h | Rat      |  |          |
| Germ cell mutagenicity:        |          |       |         |          | OECD 471 (Bacterial Reverse Mutation Test) | Negative |
| Aspiration hazard:             |          |       |         |          |  | No       |





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

| 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:   | NOEC/NOEL | 28d  | 2,045   | mg/l | Oncorhynchus mykiss             |  |  |
| 12.1. Toxicity to fish:   | NOELR     | 28d  | 2,04    | mg/l | Salmo gairdneri                 |  |  |
| 12.1. Toxicity to fish:   | LC50      | 96h  | 11,4    | mg/l | Oncorhynchus mykiss             | OECD 203 (Fish, Acute Toxicity Test)             |  |
| 12.1. Toxicity to fish:   | LL50      | 96h  | 11,4    | mg/l | Salmo gairdneri                 | OECD 203 (Fish, Acute Toxicity Test)             |  |
| 12.1. Toxicity to daphnia:  | EC50      | 48h  | 3       | mg/l | Daphnia magna                   | OECD 202 (Daphnia sp. Acute Immobilisation Test) |  |
| 12.1. Toxicity to daphnia:  | NOEC/NOEL | 21d  | 1       | mg/l | Daphnia magna                   | OECD 211 (Daphnia magna Reproduction Test)       |  |
| 12.1. Toxicity to daphnia:  | NOELR     | 48h  | 2,1     | mg/l | Daphnia magna                   |  |  |
| 12.1. Toxicity to algae:  | EC50      | 72h  | 30      | mg/l | Pseudokirchneriella subcapitata | OECD 201 (Alga, Growth Inhibition Test)          |  |
| 12.2. Persistence and degradability:                              |           | 28d  | 81      | %    |                                 |  | Analogous conclusion                                 |
| 12.3. Bioaccumulative potential:                                  | BCF       |      | 242-253 |      |                                 |  |  |
| 12.4. Mobility in soil:   |           |      |         |      |                                 |  | Adsorption in ground., Product is slightly volatile. |
| 12.5. Results of PBT and vPvB assessment                          |           |      |         |      |                                 |  | No PBT substance, No vPvB substance                  |
| Other information:  | AOX       |      | 0       | %    |                                 |  |  |

| Butane                                   |          |      |       |      |          |             |   |
|--|----------|------|-------|------|----------|-------------|---|
| Toxicity / effect                        | Endpoint | Time | Value | Unit | Organism | Test method | Notes   |
| 12.1. Toxicity to fish:                  | LC50     | 96h  | 24,11 | mg/l |          | QSAR        |   |
| 12.1. Toxicity to daphnia:               | LC50     | 48h  | 14,22 | mg/l |          | QSAR        |   |
| 12.3. Bioaccumulative potential:         | Log Pow  |      | 2,98  |      |          |             | A notable biological accumulation potential is not to be expected (LogPow 1-3). |
| 12.5. Results of PBT and vPvB assessment |          |      |       |      |          |             | No PBT substance, No vPvB substance   |

| Propane           |          |      |       |      |          |             |       |
|-------------------|----------|------|-------|------|----------|-------------|-------|
| Toxicity / effect | Endpoint | Time | Value | Unit | Organism | Test method | Notes |

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|  |         |  |      |  |  |  |   |
|--|---------|--|------|--|--|--|---|
| 12.3. Bioaccumulative potential:         | Log Pow |  | 2,28 |  |  |  | A notable biological accumulation potential is not to be expected (LogPow 1-3). |
| 12.5. Results of PBT and vPvB assessment |         |  |      |  |  |  | No PBT substance, No vPvB substance   |

| Isobutane                                |          |      |       |      |          |             |   |
|--|----------|------|-------|------|----------|-------------|---|
| Toxicity / effect                        | Endpoint | Time | Value | Unit | Organism | Test method | Notes   |
| 12.3. Bioaccumulative potential:         |          |      |       |      |          |             | A notable biological accumulation potential is not to be expected (LogPow 1-3). |
| 12.1. Toxicity to fish:                  | LC50     | 96h  | 27,98 | mg/l |          |             |   |
| 12.1. Toxicity to algae:                 | EC50     | 96h  | 7,71  | mg/l |          |             |   |
| 12.2. Persistence and degradability:     |          |      |       |      |          |             | Readily biodegradable   |
| 12.5. Results of PBT and vPvB assessment |          |      |       |      |          |             | No PBT substance, No vPvB substance   |

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

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

EC disposal code no.:

The waste codes are recommendations based on the scheduled use of this product.

Owing to the user's specific conditions for use and disposal, other waste codes may be allocated under certain circumstances. (2014/955/EU)

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

Recommendation:

Do not perforate, cut up or weld uncleaned container.

15 01 04 metallic packaging

15 01 10 packaging containing residues of or contaminated by hazardous substances

## 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: Not applicable



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Tunnel restriction code: D  
**Transport by sea (IMDG-code)**  
 14.2. UN proper shipping name:  
 AEROSOLS  
 14.3. Transport hazard class(es): 2.1  
 14.4. Packing group: -  
 EmS: F-D, S-U  
 Marine Pollutant: n.a  
 14.5. Environmental hazards: Not applicable



**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:

Comply with national regulations/laws governing the protection of young people at work (national implementation of the Directive 94/33/EC)!  
 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 |
|-------------------|------------------|---|---|
| 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): 98,28 %

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

30 % and more  
 aliphatic hydrocarbons

perfumes

National rules/regulation for the compliance with maximum quantities with regard to phosphates and or phosphorous compounds must be observed and complied with.

Observe incident regulations.

### 15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

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## SECTION 16: Other information

Revised sections: 2, 3, 8, 9, 11, 12, 14  
 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                              |
|---|---|
| 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 3, H412   | 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.  
 H304 May be fatal if swallowed and enters airways.  
 H315 Causes skin irritation.  
 H336 May cause drowsiness or dizziness.  
 H411 Toxic to aquatic life with long lasting effects.

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. Liq. — Flammable liquid

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

AC Article Categories  
 acc., acc. to according, according to  
 ACGIH American Conference of Governmental Industrial Hygienists  
 ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)  
 AOEL Acceptable Operator Exposure Level  
 AOX Adsorbable organic halogen compounds  
 approx. approximately  
 Art., Art. no. Article number  
 ATE Acute Toxicity Estimate according to Regulation (EC) 1272/2008 (CLP)  
 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)  
 BCF Bioconcentration factor  
 BGV Berufsgenossenschaftliche Vorschrift (= Accident Prevention Regulation)  
 BHT Butylhydroxytoluol (= 2,6-Di-t-butyl-4-methyl-phenol)  
 BMGV Biological monitoring guidance value (EH40, UK)  
 BOD Biochemical oxygen demand  
 BSEF Bromine Science and Environmental Forum  
 bw body weight  
 CAS Chemical Abstracts Service

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CEC Coordinating European Council for the Development of Performance Tests for Fuels, Lubricants and Other Fluids  
 CESIO Comité Européen des Agents de Surface et de leurs Intermédiaires Organiques  
 CIPAC Collaborative International Pesticides Analytical Council  
 CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)  
 CMR carcinogenic, mutagenic, reproductive toxic  
 COD Chemical oxygen demand  
 CTFA Cosmetic, Toiletry, and Fragrance Association  
 DMEL Derived Minimum Effect Level  
 DNEL Derived No Effect Level  
 DOC Dissolved organic carbon  
 DT50 Dwell Time - 50% reduction of start concentration  
 DVS Deutscher Verband für Schweißen und verwandte Verfahren e.V. (= German Association for Welding and Allied Processes)  
 dw dry weight  
 e.g. for example (abbreviation of Latin 'exempli gratia'), for instance  
 EC European Community  
 ECHA European Chemicals Agency  
 EEA European Economic Area  
 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)  
 ERC Environmental Release Categories  
 ES Exposure scenario  
 etc. et cetera  
 EU European Union  
 EWC European Waste Catalogue  
 Fax. Fax number  
 gen. general  
 GHS Globally Harmonized System of Classification and Labelling of Chemicals  
 GWP Global warming potential  
 HET-CAM Hen's Egg Test - Chorionallantoic Membrane  
 HGWP Halocarbon Global Warming Potential  
 IARC International Agency for Research on Cancer  
 IATA International Air Transport Association  
 IBC Intermediate Bulk Container  
 IBC (Code) International Bulk Chemical (Code)  
 IC Inhibitory concentration  
 IMDG-code International Maritime Code for Dangerous Goods  
 incl. including, inclusive  
 IUCLID International Uniform Chemical Information Database  
 LC lethal concentration  
 LC50 lethal concentration 50 percent kill  
 LCLo lowest published lethal concentration  
 LD Lethal Dose of a chemical  
 LD50 Lethal Dose, 50% kill  
 LDLo Lethal Dose Low  
 LOAEL Lowest Observed Adverse Effect Level  
 LOEC Lowest Observed Effect Concentration  
 LOEL Lowest Observed Effect Level  
 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  
 NIOSH National Institute of Occupational Safety and Health (United States of America)  
 NOAEC No Observed Adverse Effective Concentration  
 NOAEL No Observed Adverse Effect Level  
 NOEC No Observed Effect Concentration  
 NOEL No Observed Effect Level  
 ODP Ozone Depletion Potential

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OECD Organisation for Economic Co-operation and Development  
org. organic  
PAH polycyclic aromatic hydrocarbon  
PBT persistent, bioaccumulative and toxic  
PC Chemical product category  
PE Polyethylene  
PNEC Predicted No Effect Concentration  
POCP Photochemical ozone creation potential  
ppm parts per million  
PROC Process category  
PTFE Polytetrafluorethylene  
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)  
SADT Self-Accelerating Decomposition Temperature  
SAR Structure Activity Relationship  
SU Sector of use  
SVHC Substances of Very High Concern  
Tel. Telephone  
ThOD Theoretical oxygen demand  
TOC Total organic carbon  
TRGS Technische Regeln für Gefahrstoffe (=Technical Regulations for Hazardous Substances)  
UN RTDG United Nations Recommendations on the Transport of Dangerous Goods  
VbF Verordnung über brennbare Flüssigkeiten (= Regulation for flammable liquids (Austria))  
VOC Volatile organic compounds  
vPvB very persistent and very bioaccumulative  
WEL-TWA, WEL-STEL WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period), WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period) (EH40, UK).  
WHO World Health Organization  
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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