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

Revision date / version: 07.03.2017 / 0012

Replacing version dated / version: 03.11.2016 / 0011

Valid from: 07.03.2017 PDF print date: 17.03.2017 Keramik-Schock-Rostloeser 300 mL

Art.: 1641

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

1.1 Product identifier

Keramik-Schock-Rostloeser 300 mL

Art.: 1641

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

(GB)

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:

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 (FC) 1272/2008 (CLP)

| Olassilication acc | oldssmoution docording to regulation (ES) 12122000 (OEI) | | | | | | | | |
|--------------------|--|---|--|--|--|--|--|--|--|
| 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 | 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)



Danger

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. P251-Do not pierce or burn, even after use. P261-Avoid breathing vapours or spray. 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, < 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 (< 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

Aerosol

3.1 Substance

n.a. 7 Mixture

| 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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| content % | 20-40 |
|---|-------------------------|
| Classification according to Regulation (EC) 1272/2008 (CLP) | Flam. Liq. 2, H225 |
| | Skin Irrit. 2, H315 |
| | Asp. Tox. 1, H304 |
| | STOT SE 3, H336 |
| | 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 3.1/3.2 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

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.

Eve 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

Toxic gases

Danger of bursting (explosion) when heated



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Explosive vapour/air mixture

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/m3

| © Chemical Name | Hydrocarbons, C | C6-C7, n-alkanes, isoalkanes, cy | yclics, < 5% n-hexane | | Content %:20-40 |
|------------------------------|-----------------|----------------------------------|-----------------------|---|-----------------|
| WEL-TWA: 600 mg/m3 | | WEL-STEL: | | | |
| Monitoring procedures: | - | Draeger - Hydrocarbons 2/a (8 | 81 03 581) | | |
| | - | Draeger - Hydrocarbons 0,1% | /c (81 03 571) | | |
| | - | Compur - KITA-187 S (551 17 | 74) | | |
| BMGV: | | | Other information: | - | |
| Chemical Name | Butane | | | | Content %: |
| WEL-TWA: 600 ppm (1450 mg/m3 | 5) | WEL-STEL: 750 ppm (18 | 310 mg/m3) | | |
| Monitoring procedures: | - | Compur - KITA-221 SA (549 4 | 159) | | |
| BMGV: | | | Other information: | - | |
| Chemical Name | Propane | | | | Content %: |
| WEL-TWA: 1000 ppm (ACGIH) | • | WEL-STEL: | | | |
| Monitoring procedures: | - | Compur - KITA-125 SA (549 9 | 954) | | |
| BMGV: | | | Other information: | - | |
| Chemical Name | Isobutane | | | | Content %: |
| WEL-TWA: 1000 ppm (ACGIH) | | WEL-STEL: | | | |
| Monitoring procedures: | - | Compur - KITA-113 SB(C) (54 | 19 368) | | |
| 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). | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period). | 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.

| 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 - oral | Long term, systemic effects | DNEL | 699 | mg/kg bw/day | | | | | |
| Consumer | Human - dermal | Long term, systemic effects | DNEL | 699 | mg/kg bw/day | | | | | |
| Consumer | Human - inhalation | Long term, systemic effects | DNEL | 608 | mg/kg bw/day | | | | | |
| Workers / employees | Human - dermal | Long term, systemic effects | DNEL | 773 | mg/kg bw/day | | | | | |
| Workers / employees | Human - inhalation | Short term, systemic effects | DNEL | 2035 | mg/kg bw/day | | | | | |

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.



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EN 14042 "Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological

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 (Level 6)

Protective hand cream recommended.

The breakthrough times determined in accordance with EN 374 Part 3 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: Beige Odour: Odourless Odour threshold: Not determined

pH-value: n.a.

Melting point/freezing point: Not determined

Initial boiling point and boiling range: n.a. Flash point: -60 °C Evaporation rate: n.a. Flammability (solid, gas): Lower explosive limit: 0,6 Vol-% Upper explosive limit: 10.9 Vol-% Vapour pressure: 4000 hPa (20°C) Vapour density (air = 1): Not determined



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Density: 0,6 g/cm3 (20°C)

Bulk density: n.a.

Solubility(ies):
Water solubility:

Not determined
Insoluble

Partition coefficient (n-octanol/water): Not determined

Auto-ignition temperature: 230 °C (Ignition temperature)

Auto-ignition temperature: No

Decomposition temperature:

Viscosity:

Not determined

Not determined

Explosive properties: Product is not explosive. Possible build up of explosive/highly

flammable vapour/air mixture.

Oxidising properties: Not determined

9.2 Other information

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

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).

| Keramik-Schock-Rostloeser 30 | 00 mL | | | | | |
|---|----------|-------|------|----------|-------------|--------|
| Art.: 1641 | | | | | | |
| 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 | | | | | | n.d.a. |
| sensitisation: | | | | | | |
| 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 - | | | | | | n.d.a. |
| repeated exposure (STOT-RE): Aspiration hazard: | | | | | | 200 |
| • | | | | | | n.d.a. |
| Symptoms: | | | | | | n.d.a. |



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| Toxicity / effect | Endpoint | Value | Unit | Organism | Test method | Notes |
|----------------------------------|----------|--------|------------|----------|---------------------------|-----------------------|
| Acute toxicity, by oral route: | LD50 | >5000 | mg/kg | Rat | OECD 401 (Acute Oral | |
| ricute terminy, by crail realist | | 7 0000 | 9,9 | 1.00 | Toxicity) | |
| Acute toxicity, by dermal route: | LD50 | >2000 | mg/kg | Rat | OECD 402 (Acute | |
| reate termenty, by derman reater | | - 2000 | 9,9 | 1.00 | Dermal Toxicity) | |
| Acute toxicity, by inhalation: | LC50 | >20 | mg/l/4h | Rat | OECD 403 (Acute | Vapours |
| ricute textony, by initialation. | 2000 | 720 | 1119/1/111 | - rui | Inhalation Toxicity) | Vapoulo |
| Skin corrosion/irritation: | | | | | initial and it i oxioity) | Repeated |
| on concolory madem | | | | | | exposure may |
| | | | | | | cause skin |
| | | | | | | dryness or |
| | | | | | | cracking. |
| Skin corrosion/irritation: | | | | | | Product remove |
| on our concern made in | | | | | | fat., Irritant |
| Serious eye damage/irritation: | | | | | | Not irritant |
| Respiratory or skin | | | | | | Not sensitizising |
| sensitisation: | | | | | | . 101 001.0.112.0.119 |
| Specific target organ toxicity - | | | | | | May cause |
| single exposure (STOT-SE): | | | | | | respiratory |
| 3 - 1 / / | | | | | | irritation. |
| Aspiration hazard: | | | | | | Yes |
| Symptoms: | | | | | | may cause |
| , , | | | | | | headaches and |
| | | | | | | vertigo. |
| Symptoms: | | | | | | drowsiness, |
| , , | | | | | | unconsciousnes |
| | | | | | | , |
| | | | | | | heart/circulatory |
| | | | | | | disorders, |
| | | | | | | headaches, |
| | | | | | | cramps, |
| | | | | | | drowsiness, |
| | | | | | | mucous |
| | | | | | | membrane |
| | | | | | | irritation, |
| | | | | | | dizziness, |
| | | | | | | nausea and |
| | | | | | | vomiting., |
| | | | | | | Chemical |
| | | | | | | pneumonitis |
| | | | | | | (condition simila |
| | | | | | | to pneumonia) |

| 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 | Negative |
| | | | | | Reverse Mutation Test) | |
| Symptoms: | | | | | | ataxia, breathing difficulties, drowsiness, unconsciousness, frostbite, disturbed heart rhythm, headaches, cramps, intoxication, dizziness, nausea and vomiting. |



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| Propane | | | | | | |
|---|----------|--------|---------|----------|--|--|
| 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 |
| Reproductive toxicity (Developmental toxicity): | NOAEC | 21,641 | mg/l | | OECD 422 (Combined Repeated Dose Tox. Study with the Reproduction/Developm. Tox. Screening Test) | |
| Symptoms: | | | | | | breathing difficulties, unconsciousnes , frostbite, headaches, cramps, mucous membrane irritation, dizziness, nausea and vomiting. |

| Isobutane | | | | | | |
|--------------------------------|----------|-------|---------|----------|------------------------|-----------------|
| Toxicity / effect | Endpoint | Value | Unit | Organism | Test method | Notes |
| Acute toxicity, by inhalation: | LC50 | 658 | mg/l/4h | Rat | | |
| Serious eye damage/irritation: | | | | Rabbit | | Not irritant |
| Germ cell mutagenicity: | | | | | OECD 471 (Bacterial | Negative |
| | | | | | Reverse Mutation Test) | |
| Symptoms: | | | | | | unconsciousness |
| | | | | | | , frostbite, |
| | | | | | | headaches, |
| | | | | | | cramps, |
| | | | | | | dizziness, |
| | | | | | | nausea and |
| | | | | | | vomiting. |

SECTION 12: Ecological information

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

| Keramik-Schock-Rostlo | eser 300 mL | | | | | | |
|----------------------------|-------------|------|-------|------|----------|-------------|---|
| Art.: 1641 | | | | | | | |
| 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 | | | | | | | n.d.a. |
| degradability: | | | | | | | |
| 12.3. Bioaccumulative | | | | | | | n.d.a. |
| potential: | | | | | | | |
| 12.4. Mobility in soil: | | | | | | | n.d.a. |
| 12.5. Results of PBT | | | | | | | n.d.a. |
| and vPvB assessment | | | | | | | |
| 12.6. Other adverse | | | | | | | n.d.a. |
| effects: | | | | | | | |
| Other information: | | | | | | | According to the recipe, contains no AOX. |

| Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane | | | | | | | | | | |
|--|----------|------|-------|------|----------|-------------|-------|--|--|--|
| Toxicity / effect | Endpoint | Time | Value | Unit | Organism | Test method | Notes | | | |
| | | • | • | | <u> </u> | | • | | | |



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| 12.1. Toxicity to fish: | LC50 | 96h | 11,4 | mg/l | Leuciscus idus | 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: | NOELR | 21d | 1 | mg/l | Daphnia magna | OECD 211 | |
| | | | | | | (Daphnia magna | |
| | | | | | | Reproduction Test) | |
| 12.1. Toxicity to algae: | EC50 | 72h | 30 | mg/l | Pseudokirchneriell | OECD 201 (Alga, | |
| | | | | | a subcapitata | Growth Inhibition | |
| | | | | | | Test) | |
| 12.2. Persistence and | | 28d | 81 | % | | | Readily |
| degradability: | | | | | | | biodegradable, |
| | | | | | | | Analogous |
| | | | | | | | conclusion |
| 12.5. Results of PBT | | | | | | | No PBT |
| and vPvB assessment | | | | | | | substance, No |
| | | | | | | | vPvB substance |
| Other information: | DOC | | | | | | DOC-elimination |
| | | | | | | | degree(complexi |
| | | | | | | | ng organic |
| | | | | | | | substance)>= |
| | | | | | | | 80%/28d:, n.a. |
| 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 |
| 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 |

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



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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):2.114.4. Packing group:-Classification code:5FLQ:1 L

14.5. Environmental hazards: environmentally hazardous

Tunnel restriction code: D

Transport by sea (IMDG-code)

14.2. UN proper shipping name:

AEROSOLS (HYDROCARBONS, C6-C7, N-ALKANES, ISOALKANES, CYCLICS, < 5% N-HEXANE)

14.3. Transport hazard class(es):2.114.4. 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

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

Minimum amount regulations have not been taken into account.

Danger code and packing code on request.

Comply with special provisions.

SECTION 15: Regulatory information

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

98,1 %

Observe restrictions:

Comply with trade association/occupational health regulations.

Directive 2010/75/EU (VOC):









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REGULATION (EC) No 648/2004

30 % and more aliphatic hydrocarbons

perfumes

Observe incident regulations.

Observe youth employment law (German regulation).

Observe law on protection of expectant mothers (German regulation).

15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

SECTION 16: Other information

Revised sections:

2,16

These details refer to the product as it is delivered.

Employee instruction/training in handling hazardous materials is required.

Employee training in handling dangerous goods 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 | Evaluation method used |
|--|---|
| (EC) No. 1272/2008 (CLP) | |
| 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.

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

 ${\tt STOT\ SE-Specific\ target\ organ\ toxicity\ -\ single\ exposure\ -\ narcotic\ effects}$

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



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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

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

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



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LOEC Lowest Observed Effect Concentration

LOEL Lowest Observed Effect Level

Limited Quantities IΩ

MARPOL International Convention for the Prevention of Marine Pollution from Ships

not applicable n.a. n.av. not available not checked n.c. n.d.a. no data available

NIOSH National Institute of Occupational Safety and Health (United States of America)

NOAECNo Observed Adverse Effective Concentration

NOAEL No Observed Adverse Effect Level NOEC No Observed Effect Concentration NOEL No Observed Effect Level ODP Ozone Depletion Potential

OECD Organisation for Economic Co-operation and Development

org. organic

PAH polycyclic aromatic hydrocarbon **PBT** persistent, bioaccumulative and toxic

PC Chemical product category

PF Polyethylene

PNEC Predicted No Effect Concentration POCP Photochemical ozone creation potential

parts per million mag PROC Process category PTFE Polytetrafluorethylene

REACHRegistration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning the Registration,

Evaluation, Authorisation and Restriction of Chemicals)

9xx-xxx-x No. is automatically assigned, e.g. to pre-registrations without a CAS No. or other numerical identifier. List REACH-IT List-No.

Numbers do not have any legal significance, rather they are purely technical identifiers for processing a submission via REACH-IT.

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 Verordnung über brennbare Flüssigkeiten (= Regulation for flammable liquids (Austria)) VbF

VOC Volatile organic compounds

vPvB very persistent and very bioaccumulative

WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) WEL-TWA, WEL-STEL reference period), WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period) (EH40, UK).

WHO World Health Organization

wet weight wwt

The statements made here should describe the product with regard to the necessary safety precautions - they are not meant to guarantee definite characteristics - but they are based on our present up-to-date knowledge. No responsibility.

These statements were made by: Chemical Check Platz 1-7, D-32839 Steinheim, Tel.: +49 5233 94 17 0, Fax: +49 5233 94 17 90

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