# 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

**Bohr- und Schneidöl 400 ml**
**Art.: 9101353**

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

**Relevant identified uses of the substance or mixture:**
Lubricant
**Uses advised against:**
No information available at present.

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

BTI Befestigungstechnik GmbH & Co. KG
Salzstr. 51
74653 Ingelfingen
Tel.: +49 7940 141 141
Fax: +49 7940 141 9141
Email: info@bti.de
Homepage: www.bti.de

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 (BRC)
+1 872 5888271 (BRC)

## 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 |
|---|---|---|
| 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

H222-Extremely flammable aerosol. H229-Pressurised container: May burst if heated.

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.
P410+P412-Protect from sunlight. Do not expose to temperatures exceeding 50 °C.

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

**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 %).
The mixture does not contain any substance with endocrine disrupting properties (< 0,1 %).

## SECTION 3: Composition/information on ingredients

Aerosol
**3.1 Substances**
n.a.
**3.2 Mixtures**

| **Distillates (petroleum), solvent-dewaxed heavy paraffinic** | |
|---|---|
| **Registration number (REACH)** | 01-2119471299-27-XXXX |
| **Index** | 649-474-00-6 |
| **EINECS, ELINCS, NLP, REACH-IT List-No.** | 265-169-7 |
| **CAS** | 64742-65-0 |
| **content %** | 40-60 |
| **Classification according to Regulation (EC) 1272/2008 (CLP), M-factors** | Asp. Tox. 1, H304 |

| **Distillates (petroleum), hydrotreated light paraffinic** | |
|---|---|
| **Registration number (REACH)** | 01-2119487077-29-XXXX |
| **Index** | 649-468-00-3 |
| **EINECS, ELINCS, NLP, REACH-IT List-No.** | 265-158-7 |
| **CAS** | 64742-55-8 |
| **content %** | 1-5 |

| | |
|---|---|
| **Classification according to Regulation (EC) 1272/2008 (CLP), M-factors** | Asp. Tox. 1, H304 |

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.
**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**
Typically no exposure pathway.
Rinse the mouth thoroughly with water.
Do not induce vomiting. Consult doctor immediately.
### 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.
The following may occur:
Irritation of the respiratory tract
Coughing
Headaches
Dizziness
Effects/damages the central nervous system
### 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**
CO2
Extinction powder
Water jet spray
Large fire:
Water jet spray
Alcohol resistant foam
**Unsuitable extinguishing media**

High volume water jet

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

In case of fire the following can develop:
Possible build up of explosive/highly flammable vapour/air mixture.
Oxides of carbon
Oxides of sulphur
Oxides of phosphorus
Oxides of nitrogen
Aldehydes
Danger of bursting (explosion) when heated

**5.3 Advice for firefighters**

For personal protective equipment see Section 8.
In case of fire and/or explosion do not breathe fumes.
Protective respirator with independent air supply.
Cool container at risk with water.
Dispose of contaminated extinction water according to official regulations.

## SECTION 6: Accidental release measures

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

**6.1.1 For non-emergency personnel**

In case of spillage or accidental release, wear personal protective equipment as specified in section 8 to prevent contamination.
Ensure sufficient ventilation, remove sources of ignition.
Avoid dust formation with solid or powder products.
Leave the danger zone if possible, use existing emergency plans if necessary.
Avoid inhalation, and contact with eyes or skin.

**6.1.2 For emergency responders**

See section 8 for suitable protective equipment and material specifications.

**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.

**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.
Take measures against electrostatic charging, if appropriate.
Do not use on hot surfaces.

Avoid contact with eyes or skin.
Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.
Observe directions on label and instructions for use.
Use working methods according to operating instructions.

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

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

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

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

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

| GB **Chemical Name** | Butane | | Content %: |
|---|---|---|---|
| WEL-TWA: 600 ppm (1450 mg/m3) | WEL-STEL: 750 ppm (1810 mg/m3) | | --- |
| Monitoring procedures: | - Compur - KITA-221 SA (549 459)<br>- OSHA PV2010 (n-Butane) - 1993 | | |
| BMGV: --- | | Other information: | --- |

| GB **Chemical Name** | Propane | | Content %: |
|---|---|---|---|
| WEL-TWA: 1000 ppm (ACGIH) | WEL-STEL: --- | | --- |
| Monitoring procedures: | - Compur - KITA-125 SA (549 954)<br>- OSHA PV2077 (Propane) - 1990 | | |
| BMGV: --- | | Other information: | --- |

| GB **Chemical Name** | Isobutane | | Content %: |
|---|---|---|---|
| WEL-TWA: 1000 ppm (EX) (ACGIH) | WEL-STEL: --- | | --- |
| Monitoring procedures: | - Compur - KITA-113 SB(C) (549 368) | | |
| BMGV: --- | | Other information: | --- |

| GB **Chemical Name** | Oil mist, mineral | | Content %: |
|---|---|---|---|
| WEL-TWA: 5 mg/m3 (Mineral oil, excluding metal working fluids, ACGIH) | WEL-STEL: --- | | --- |
| Monitoring procedures: | - Draeger - Oil Mist 1/a (67 33 031) | | |
| BMGV: --- | | Other information: | --- |

| **Distillates (petroleum), solvent-dewaxed heavy paraffinic** |
|---|

| Area of application | Exposure route / Environmental compartment | Effect on health | Descriptor | Value | Unit | Note |
|---|---|---|---|---|---|---|
| | Environment - oral (animal feed) | | PNEC | 9,33 | mg/kg feed | |
| Consumer | Human - inhalation | Long term, local effects | DNEL | 1,2 | mg/m3 | |
| Workers / employees | Human - inhalation | Long term, local effects | DNEL | 5,4 | mg/m3 | |

| Distillates (petroleum), hydrotreated light paraffinic | | | | | | |
|---|---|---|---|---|---|---|
| **Area of application** | **Exposure route / Environmental compartment** | **Effect on health** | **Descriptor** | **Value** | **Unit** | **Note** |
| | Environment - oral (animal feed) | | PNEC | 9,33 | mg/kg feed | |
| Consumer | Human - inhalation | Long term, local effects | DNEL | 1,19 | mg/m3 | |
| Consumer | Human - oral | Long term, systemic effects | DNEL | 0,74 | mg/kg bw/day | |
| Workers / employees | Human - dermal | Long term, systemic effects | DNEL | 0,97 | mg/kg bw/day | |
| Workers / employees | Human - inhalation | Long term, systemic effects | DNEL | 2,7 | mg/m3 | |

GB 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 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:
Chemical resistant protective gloves (EN ISO 374).
Recommended
Protective nitrile gloves (EN ISO 374).
Minimum layer thickness in mm:
>= 0,5
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 A2 P2 (EN 14387), code colour brown, white
Respiratory protection appliance (insulation device) (e.g. EN 137 or EN 138)
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 yellow |
| Odour: | Characteristic |
| Melting point/freezing point: | There is no information available on this parameter. |
| Boiling point or initial boiling point and boiling range: | -44,5 °C |
| Flammability: | Does not apply to aerosols. |
| Lower explosion limit: | 1,5 Vol-% |
| Upper explosion limit: | 10,9 Vol-% |
| Flash point: | -97 °C |
| Auto-ignition temperature: | 365 °C |
| Decomposition temperature: | There is no information available on this parameter. |
| pH: | Mixture is non-soluble (in water). |
| Kinematic viscosity: | >20,5 mm2/s (40°C, Active substance ) |
| Kinematic viscosity: | Does not apply to aerosols. |
| Solubility: | Insoluble |
| Partition coefficient n-octanol/water (log value): | Does not apply to mixtures. |
| Vapour pressure: | 3,9 hPa (20°C) |
| Density and/or relative density: | 0,736 g/cm3 (20°C) |
| Relative vapour density: | Does not apply to aerosols. |
| Particle characteristics: | Does not apply to aerosols. |

**9.2 Other information**

| | |
|---|---|
| Explosives: | Product is not explosive. Possible build up of explosive/highly flammable vapour/air mixture. |
| Oxidising liquids: | There is no information available on this parameter. |
| Solvents content: | 30 % |

## 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**
See also section 7.
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 hazard classes as defined in Regulation (EC) No 1272/2008**

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

| **Bohr- und Schneidöl 400 ml Art.: 9101353** | | | | | | |
|---|---|---|---|---|---|---|
| **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. |
| Specific target organ toxicity - repeated exposure (STOT-RE): | | | | | | n.d.a. |
| Aspiration hazard: | | | | | | n.d.a. |
| Symptoms: | | | | | | n.d.a. |

| **Distillates (petroleum), solvent-dewaxed heavy paraffinic** | | | | | | |
|---|---|---|---|---|---|---|
| **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 | >5000 | mg/kg | Rabbit | OECD 402 (Acute Dermal Toxicity) | |
| Acute toxicity, by inhalation: | LD50 | >5,53 | mg/l/4h | Rat | OECD 403 (Acute Inhalation Toxicity) | Aerosol |
| Skin corrosion/irritation: | | | | Rabbit | OECD 404 (Acute Dermal Irritation/Corrosion) | Not irritant, Analogous conclusion |

| | | | | | | |
|---|---|---|---|---|---|---|
| Serious eye damage/irritation: | | | | Rabbit | OECD 405 (Acute Eye Irritation/Corrosion) | Not irritant, Analogous conclusion |
| Respiratory or skin sensitisation: | | | | Guinea pig | OECD 406 (Skin Sensitisation) | No (skin contact), Analogous conclusion |
| Germ cell mutagenicity: | | | | Mouse | OECD 474 (Mammalian Erythrocyte Micronucleus Test) | Negative, Analogous conclusion |
| Germ cell mutagenicity: | | | | | OECD 473 (In Vitro Mammalian Chromosome Aberration Test) | Negative, Analogous conclusion Chinese hamster |
| Germ cell mutagenicity: | | | | Salmonella typhimurium | OECD 471 (Bacterial Reverse Mutation Test) | Negative, Analogous conclusion |
| Germ cell mutagenicity: | | | | Mouse | OECD 476 (In Vitro Mammalian Cell Gene Mutation Test) | Negative, Analogous conclusion |
| Carcinogenicity: | | | | Mouse | | Female, Negative |
| Carcinogenicity: | | | | Mouse | OECD 451 (Carcinogenicity Studies) | Negative, Analogous conclusion 78 weeks, dermal |
| Reproductive toxicity: | | | | Rat | | Negative |
| Reproductive toxicity (Developmental toxicity): | | | | Rat | OECD 414 (Prenatal Developmental Toxicity Study) | Negative, Analogous conclusion dermal |
| Reproductive toxicity (Effects on fertility): | | | | Rat | OECD 421 (Reproduction/Developmental Toxicity Screening Test) | Negative, Analogous conclusion oral, dermal |
| Aspiration hazard: | | | | | | Yes |
| Symptoms: | | | | | | mucous membrane irritation, dizziness, nausea |

| | | | | | | |
|---|---|---|---|---|---|---|
| Specific target organ toxicity - repeated exposure (STOT-RE), dermal: | NOAEL | ~1000 | mg/kg bw/d | Rabbit | OECD 410 (Repeated Dose Dermal Toxicity - 90-Day) | Analogous conclusion |
| Specific target organ toxicity - repeated exposure (STOT-RE), dermal: | NOAEL | 30 | mg/kg/d | Rat | OECD 411 (Subchronic Dermal Toxicity - 90-day Study) | Analogous conclusion |
| Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.: | NOAEL | 0,22 | mg/l | Rat | | Aerosol, Analogous conclusion 4 weeks |
| Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.: | NOAEL | 0,15 | mg/l | Rat | | Aerosol, Analogous conclusion 13 weeks |

| **Distillates (petroleum), hydrotreated light paraffinic** | | | | | | |
|---|---|---|---|---|---|---|
| **Toxicity / effect** | **Endpoint** | **Value** | **Unit** | **Organism** | **Test method** | **Notes** |
| Acute toxicity, by oral route: | LD50 | >5000 | mg/kg | Rat | OECD 401 (Acute Oral Toxicity) | Analogous conclusion |
| Acute toxicity, by dermal route: | LD50 | >5000 | mg/kg | Rabbit | OECD 402 (Acute Dermal Toxicity) | Analogous conclusion |
| Acute toxicity, by inhalation: | LC50 | >5,53 | mg/l/4h | Rat | OECD 403 (Acute Inhalation Toxicity) | Aerosol, Analogous conclusion |
| Skin corrosion/irritation: | | | | Rabbit | OECD 404 (Acute Dermal Irritation/Corrosion) | Not irritant, Analogous conclusion |
| Serious eye damage/irritation: | | | | Rabbit | OECD 405 (Acute Eye Irritation/Corrosion) | Not irritant, Analogous conclusion |
| Respiratory or skin sensitisation: | | | | Guinea pig | OECD 406 (Skin Sensitisation) | No (skin contact), Analogous conclusion |
| Germ cell mutagenicity: | | | | Salmonella typhimurium | OECD 471 (Bacterial Reverse Mutation Test) | Negative, Analogous conclusion |
| Germ cell mutagenicity: | | | | Mammalian | OECD 473 (In Vitro Mammalian Chromosome Aberration Test) | Negative, Analogous conclusionChinese hamster |
| Carcinogenicity: | | | | Mouse | OECD 451 (Carcinogenicity Studies) | Negative, Analogous conclusiondermal |

| | | | | | | |
|---|---|---|---|---|---|---|
| Reproductive toxicity: | NOAEL | 1000 | mg/kg bw/d | Rat | OECD 421 (Reproduction/Developmental Toxicity Screening Test) | Analogous conclusionderma l |
| Reproductive toxicity (Developmental toxicity): | | | | Rat | OECD 414 (Prenatal Developmental Toxicity Study) | Negative, Analogous conclusion |
| Aspiration hazard: | | | | | | Yes |
| Specific target organ toxicity - repeated exposure (STOT-RE), oral: | NOAEL | 125 | mg/kg bw/d | Rat | OECD 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents) | Analogous conclusion |
| Specific target organ toxicity - repeated exposure (STOT-RE), dermal: | NOAEL | <30 | mg/kg bw/d | Rat | OECD 411 (Subchronic Dermal Toxicity - 90-day Study) | Analogous conclusion |
| Specific target organ toxicity - repeated exposure (STOT-RE), dermal: | NOAEL | 1000 | mg/kg | Rabbit | OECD 410 (Repeated Dose Dermal Toxicity - 90-Day) | Analogous conclusion |
| Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.: | NOAEL | 0,05 | mg/l | Rat | OECD 412 (Subacute Inhalation Toxicity - 28-Day Study) | Aerosol, Analogous conclusion |
| Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.: | NOAEL | 0,15 | mg/l | Rat | | Aerosol, Analogous conclusion13 weeks |

| **Butane** | | | | | | |
|---|---|---|---|---|---|---|
| **Toxicity / effect** | **Endpoint** | **Value** | **Unit** | **Organism** | **Test method** | **Notes** |
| Acute toxicity, by inhalation: | LC50 | 658 | mg/l/4h | Rat | | |
| Germ cell mutagenicity: | | | | Salmonella typhimurium | OECD 471 (Bacterial Reverse Mutation Test) | Negative |
| Germ cell mutagenicity: | | | | | OECD 473 (In Vitro Mammalian Chromosome Aberration Test) | Negative |
| Germ cell mutagenicity: | | | | Human being | OECD 473 (In Vitro Mammalian Chromosome Aberration Test) | Negative |

| | | | | | | |
|---|---|---|---|---|---|---|
| Germ cell mutagenicity: | | | | Rat | OECD 474 (Mammalian Erythrocyte Micronucleus Test) | Negative |
| Aspiration hazard: | | | | | | No |
| Symptoms: | | | | | | ataxia, breathing difficulties, drowsiness, unconsciousness, frostbite, disturbed heart rhythm, headaches, cramps, intoxication, dizziness, nausea and vomiting. |
| Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.: | NOAEL | 21,394 | mg/l | Rat | OECD 422 (Combined Repeated Dose Tox. Study with the Reproduction/Developm. Tox. Screening Test) | |

| **Propane** | | | | | | |
|---|---|---|---|---|---|---|
| **Toxicity / effect** | **Endpoint** | **Value** | **Unit** | **Organism** | **Test method** | **Notes** |
| Acute toxicity, by inhalation: | LC50 | 658 | mg/l/4h | Rat | | |
| Acute toxicity, by inhalation: | LC50 | 260000 | ppmV/4h | Rat | | Gasses, Male, Analogous conclusion |
| Skin corrosion/irritation: | | | | | | Not irritant |
| Serious eye damage/irritation: | | | | | | Not irritant |
| Germ cell mutagenicity: | | | | | OECD 473 (In Vitro Mammalian Chromosome Aberration Test) | Negative |
| Germ cell mutagenicity: | | | | Salmonella typhimurium | 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) | |
| Aspiration hazard: | | | | | | No |
| Symptoms: | | | | | | breathing difficulties, unconsciousness, frostbite, headaches, cramps, mucous membrane irritation, dizziness, nausea and vomiting. |
| Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.: | NOAEL | 7,214 | mg/l | Rat | OECD 422 (Combined Repeated Dose Tox. Study with the Reproduction/Developm. Tox. Screening Test) | |
| Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.: | LOAEL | 21,641 | mg/l | Rat | OECD 422 (Combined Repeated Dose Tox. Study with the Reproduction/Developm. Tox. Screening Test) | |

| **Isobutane** | | | | | | |
|---|---|---|---|---|---|---|
| **Toxicity / effect** | **Endpoint** | **Value** | **Unit** | **Organism** | **Test method** | **Notes** |
| Acute toxicity, by inhalation: | LC50 | 658 | mg/l/4h | Rat | | |
| Acute toxicity, by inhalation: | LC50 | 260000 | ppmV/4h | Rat | | Gasses, Male |
| Serious eye damage/irritation: | | | | Rabbit | | Not irritant |
| Germ cell mutagenicity: | | | | Salmonella typhimurium | OECD 471 (Bacterial Reverse Mutation Test) | Negative |

| | | | | | | |
|---|---|---|---|---|---|---|
| Aspiration hazard: | | | | | | No |
| Symptoms: | | | | | | unconsciousness, frostbite, headaches, cramps, dizziness, nausea and vomiting. |
| Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.: | NOAEL | 21,394 | mg/l | Rat | OECD 422 (Combined Repeated Dose Tox. Study with the Reproduction/Developm. Tox. Screening Test) | |

**11.2. Information on other hazards**

| **Bohr- und Schneidöl 400 ml Art.: 9101353** | | | | | | |
|---|---|---|---|---|---|---|
| **Toxicity / effect** | **Endpoint** | **Value** | **Unit** | **Organism** | **Test method** | **Notes** |
| Endocrine disrupting properties: | | | | | | Does not apply to mixtures. |
| Other information: | | | | | | No other relevant information available on adverse effects on health. |

## SECTION 12: Ecological information

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

| **Bohr- und Schneidöl 400 ml Art.: 9101353** | | | | | | | |
|---|---|---|---|---|---|---|---|
| **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. Endocrine disrupting properties: | | | | | | | Does not apply to mixtures. |
| 12.7. Other adverse effects: | | | | | | | No information available on other adverse effects on the environment. |
| Other information: | | | | | | | According to the recipe, contains no AOX. |
| Other information: | | | | | | | DOC-elimination degree(complexing organic substance)>= 80%/28d: n.a. |

| **Distillates (petroleum), solvent-dewaxed heavy paraffinic** | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Toxicity / effect** | **Endpoint** | **Time** | **Value** | **Unit** | **Organism** | **Test method** | **Notes** |
| 12.5. Results of PBT and vPvB assessment | | | | | | | No PBT substance, No vPvB substance |
| 12.1. Toxicity to fish: | LC50 | 96h | >100 | mg/l | Pimephales promelas | OECD 203 (Fish, Acute Toxicity Test) | Analogous conclusion |
| 12.1. Toxicity to fish: | NOEC/NOEL | 14d | 1000 | mg/l | Oncorhynchus mykiss | QSAR | |
| 12.1. Toxicity to fish: | LC50 | 96h | >1000 | mg/l | Salmo gairdneri | | |
| 12.1. Toxicity to fish: | LC50 | 96h | >5000 | mg/l | Oncorhynchus mykiss | OECD 203 (Fish, Acute Toxicity Test) | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 12.1. Toxicity to daphnia: | EC50 | 48h | >1000 | mg/l | Daphnia magna | OECD 202 (Daphnia sp. Acute Immobilisation Test) | Analogous conclusion |
| 12.1. Toxicity to algae: | EC50 | 96h | >1000 | mg/l | Scenedesmus subspicatus | | |
| 12.2. Persistence and degradability: | | 28d | 6 | % | | OECD 301 B (Ready Biodegradability - Co2 Evolution Test) | Analogous conclusion |
| 12.2. Persistence and degradability: | | 28d | 31 | % | activated sludge | OECD 301 F (Ready Biodegradability - Manometric Respirometry Test) | Not readily biodegradable (Analogous conclusion) |
| 12.3. Bioaccumulative potential: | Log Pow | | >3 | | | | Low |
| Toxicity to bacteria: | EC20 | 6h | >1000 | mg/l | Pseudomonas fluorescens | | |

| **Distillates (petroleum), hydrotreated light paraffinic** | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Toxicity / effect** | **Endpoint** | **Time** | **Value** | **Unit** | **Organism** | **Test method** | **Notes** |
| 12.1. Toxicity to fish: | NOEC/NOEL | 28d | >1000 | mg/l | Oncorhynchus mykiss | QSAR | |
| 12.1. Toxicity to fish: | LL50 | 96h | >100 | mg/l | Pimephales promelas | OECD 203 (Fish, Acute Toxicity Test) | Analogous conclusion |
| 12.1. Toxicity to fish: | NOEC/NOEL | 14d | 1000 | mg/l | Oncorhynchus mykiss | QSAR | |
| 12.1. Toxicity to daphnia: | NOEC/NOEL | 21d | 10 | mg/l | Daphnia magna | OECD 211 (Daphnia magna Reproduction Test) | Analogous conclusion |
| 12.3. Bioaccumulative potential: | | | | | | | Not to be expected |
| 12.1. Toxicity to daphnia: | EL50 | 48h | > 10000 | mg/l | Daphnia magna | OECD 202 (Daphnia sp. Acute Immobilisation Test) | Analogous conclusion |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 12.1. Toxicity to algae: | NOEC/NOEL | 72h | >=100 | mg/l | Pseudokirchneriella subcapitata | OECD 201 (Alga, Growth Inhibition Test) | Analogous conclusion |
| 12.1. Toxicity to algae: | EC50 | 72h | >100 | mg/l | Pseudokirchneriella subcapitata | OECD 201 (Alga, Growth Inhibition Test) | Analogous conclusion |
| 12.2. Persistence and degradability: | | 28d | 31 | % | activated sludge | OECD 301 F (Ready Biodegradability - Manometric Respirometry Test) | Not readily biodegradable, Analogous conclusion |
| 12.3. Bioaccumulative potential: | Log Pow | | >6 | | | | @20°C |
| 12.5. Results of PBT and vPvB assessment | | | | | | | No PBT substance, No vPvB substance |

| **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 |

| **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
12 01 07 mineral-based machining oils free of halogens (except emulsions and solutions)
Recommendation:
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.

## SECTION 14: Transport information

**General statements**

| | |
|---|---|
| 14.1. UN number or ID 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 |
| 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. Maritime transport in bulk according to IMO instruments**
Freighted as packaged goods rather than in bulk, therefore not applicable.
Minimum amount regulations have not been taken into account.
Danger code and packing code on request.
Comply with special provisions.

## SECTION 15: Regulatory information

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

Observe restrictions:
Comply with national regulations/laws governing 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 2012/18/EU ("Seveso III"), Annex I, Part 2 - This product contains the substances listed below:

| Entry Nr | Dangerous substances | Notes to Annex I | Qualifying quantity (tonnes) for the application of - Lower-tier requirements | Qualifying quantity (tonnes) for the application of - Upper-tier requirements |
|---|---|---|---|---|
| 18 | Liquefied flammable gases, Category 1 or 2 (including LPG) and natural gas | 19 | 50 | 200 |

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): 30 %

Observe incident regulations.

**15.2 Chemical safety assessment**
A chemical safety assessment is not provided for mixtures.

## SECTION 16: Other information

Revised sections: n.a.
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 |
|---|---|
| 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).
H304 May be fatal if swallowed and enters airways.

Aerosol — Aerosols
Asp. Tox. — Aspiration hazard

**Key literature references and sources for data:**
Regulation (EC) No 1907/2006 (REACH) and Regulation (EC) No 1272/2008 (CLP) as amended.
Guidelines for the preparation of safety data sheets as amended (ECHA).
Guidelines on labelling and packaging according to the Regulation (EG) Nr. 1272/2008 (CLP) as amended (ECHA).
Safety data sheets for the constituent substances.
ECHA Homepage - Information about chemicals.
GESTIS Substance Database (Germany).
German Environment Agency "Rigoletto" information site on substances that are hazardous to water (Germany).
EU Occupation Exposure Limits Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, (EU) 2017/164, (EU) 2019/1831, each as amended.
National Lists of Occupational Exposure Limits for each country as amended.
Regulations on the transport of hazardous goods by road, rail, sea and air (ADR, RID, IMDG, IATA) as amended.

**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)
BCF Bioconcentration factor
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
DOC Dissolved organic carbon
dw dry weight
e.g. for example (abbreviation of Latin 'exempli gratia'), for instance
EbCx, EyCx, EbLx (x = 10, 50) Effect Concentration/Level of x % on reduction of the biomass (algae, plants)

EC European Community
ECHA European Chemicals Agency
ECx, ELx (x = 0, 3, 5, 10, 20, 50, 80, 100) Effect Concentration/Level for x % effect
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)
ErCx, EμCx, ErLx (x = 10, 50) Effect Concentration/Level of x % on inhibition of the growth rate (algae, plants)
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
Koc Adsorption coefficient of organic carbon in the soil
Kow octanol-water partition coefficient
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
IUPACInternational 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)
Log Koc Logarithm of adsorption coefficient of organic carbon in the soil
Log Kow, Log Pow Logarithm of octanol-water partition coefficient
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
NLP No-longer-Polymer
NOEC, NOEL No Observed Effect Concentration/Level
OECD Organisation for Economic Co-operation and Development
org. organic
PBT persistent, bioaccumulative and toxic
PE Polyethylene
PNEC Predicted No Effect Concentration
ppm parts per million
PVC Polyvinylchloride
REACH Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals)
REACH-IT List-No. 9xx-xxx-x No. is automatically assigned, e.g. to pre-registrations without a CAS No. or other numerical identifier. List Numbers do not have any legal significance, rather they are purely technical identifiers for processing a submission via REACH-IT.

RID Règlement concernant le transport International ferroviaire de marchandises Dangereuses (= Regulation concerning the International Carriage of Dangerous Goods by Rail)
SVHC Substances of Very High Concern
Tel. Telephone
TOC Total organic carbon
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.