# 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

## Gewebeimpraegnierung

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

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

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]:
PC34 - Textile dyes, and impregnating 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 3 - Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
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

LIQUI MOLY GmbH
Jerg-Wieland-Str. 4
89081 Ulm-Lehr
Tel.: (+49) 0731-1420-0
Fax: (+49) 0731-1420-88

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

### 1.4 Emergency telephone number

### Emergency information services / official advisory body:

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

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

## SECTION 2: Hazards identification

## 2.1 Classification of the substance or mixture

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

| Hazard class | Hazard category | Hazard statement |
|---|---|---|
| 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 an approved waste disposal facility.

Without adequate ventilation, formation of explosive mixtures may be possible.
Caution! You must comply! Damage to health possible due to inhaling! Only use outdoors or in well-ventilated rooms!
Spray only for a few seconds! Spray leather and textile products only outdoors and let them air well! Keep away from children!
n-butyl acetate
Isopropyl acetate
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane
Hydrocarbons, C10-C12, isoalkanes, <2% aromatics

## 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 Substances

n.a.

## 3.2 Mixtures

| 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** | --- |
| **content %** | 10-30 |
| **Classification according to Regulation (EC) 1272/2008 (CLP)** | Flam. Liq. 2, H225<br>Asp. Tox. 1, H304<br>Skin Irrit. 2, H315<br>STOT SE 3, H336<br>Aquatic Chronic 2, H411 |

| Hydrocarbons, C10-C12, isoalkanes, <2% aromatics | |
|---|---|
| **Registration number (REACH)** | 01-2119471991-29-XXXX |
| **Index** | --- |
| **EINECS, ELINCS, NLP** | 923-037-2 (REACH-IT List-No.) |
| **CAS** | --- |
| **content %** | 10-20 |
| **Classification according to Regulation (EC) 1272/2008 (CLP)** | Flam. Liq. 3, H226<br>Asp. Tox. 1, H304<br>Aquatic Chronic 2, H411 |

| Ethanol | Substance with specific conc. limit(s) acc. to REACh-registration |
|---|---|
| **Registration number (REACH)** | 01-2119457610-43-XXXX |
| **Index** | 603-002-00-5 |
| **EINECS, ELINCS, NLP** | 200-578-6 |
| **CAS** | 64-17-5 |
| **content %** | 10-20 |
| **Classification according to Regulation (EC) 1272/2008 (CLP)** | Flam. Liq. 2, H225<br>Eye Irrit. 2, H319 |

| n-butyl acetate | Substance for which an EU exposure limit value applies. |
|---|---|
| **Registration number (REACH)** | 01-2119485493-29-XXXX |
| **Index** | 607-025-00-1 |
| **EINECS, ELINCS, NLP** | 204-658-1 |
| **CAS** | 123-86-4 |
| **content %** | 1-2,5 |
| **Classification according to Regulation (EC) 1272/2008 (CLP)** | Flam. Liq. 3, H226<br>STOT SE 3, H336 |

| Isopropyl acetate | |
|---|---|
| **Registration number (REACH)** | 01-2119537214-46-XXXX |
| **Index** | 607-024-00-6 |
| **EINECS, ELINCS, NLP** | 203-561-1 |
| **CAS** | 108-21-4 |
| **content %** | 1-2,5 |
| **Classification according to Regulation (EC) 1272/2008 (CLP)** | Flam. Liq. 2, H225<br>Eye Irrit. 2, H319<br>STOT SE 3, H336 |

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
Typically no exposure pathway.
Rinse the mouth thoroughly with water.
Do not induce vomiting. Consult doctor immediately.
Danger of aspiration.

### 4.2 Most important symptoms and effects, both acute and delayed
If applicable delayed symptoms and effects can be found in section 11 and the absorption route in section 4.1.
In certain cases, the symptoms of poisoning may only appear after an extended period / after several hours.
The following may occur:
Irritation of the respiratory tract
Coughing
Headaches
Nausea
Effects/damages the central nervous system
Narcotic effect.
With long-term contact:
Dermatitis (skin inflammation)
Product removes fat.
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
In case of spreading near the ground, flashback to distance sources of ignition is possible.
Toxic gases
Danger of bursting (explosion) when heated
Explosive vapour/air or gas/air mixtures.

### 5.3 Advice for firefighters
In case of fire and/or explosion do not breathe fumes.
Protective respirator with independent air supply.
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 surface and ground-water infiltration, as well as ground penetration.
Prevent penetration into drains, cellars, working pits or other places in which accumulation could be hazardous.

## 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, sawdust) 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.
Avoid inhalation of the vapours.
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 storage conditions.
Observe special regulations for aerosols!
Do not store with oxidizing agents.
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
Workplace exposure limit (WEL) of the total hydrocarbon solvent content of the mixture (RCP method according to EH40):
800 mg/m3

| GB | Chemical Name | Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane | | Content %:10-30 |
|---|---|---|---|---|
| WEL-TWA: 600 mg/m3 | | WEL-STEL: --- | | --- |
| Monitoring procedures: | - | Compur - KITA-187 S (551 174) | | |
| BMGV: --- | | | Other information: (OEL acc. to RCP-method, paragraphs 84-87, EH40) | |

| GB | Chemical Name | Hydrocarbons, C10-C12, isoalkanes, <2% aromatics | | Content %:10-20 |
|---|---|---|---|---|
| WEL-TWA: 1200 mg/m3 | | WEL-STEL: --- | | --- |
| Monitoring procedures: | - | Compur - KITA-187 S (551 174) | | |

| | |
|---|---|
| BMGV: --- | Other information: (OEL acc. to RCP-method, paragraphs 84-87, EH40) |

| **Chemical Name** | Ethanol | Content %:10-20 |
|---|---|---|
| WEL-TWA: 1000 ppm (1920 mg/m3) | WEL-STEL: --- | --- |
| Monitoring procedures: | - Draeger - Alcohol 25/a Ethanol (81 01 631)<br>- Compur - KITA-104 SA (549 210)<br>DFG (D) (Loesungsmittelgemische), Methode Nr. 6 DFG (E) (Solvent mixtures) - 2013,<br>- 2002 - EU project BC/CEN/ENTR/000/2002-16 card 63-2 (2004)<br>DFG Meth. Nr. 2 (D) (Loesungsmittelgemische) - 2013 - EU project<br>- BC/CEN/ENTR/000/2002-16 card 63-2 (2004)<br>DFG Meth. Nr. 3 (D) (Loesungsmittelgemische) - 2013 - EU project<br>- BC/CEN/ENTR/000/2002-16 card 63-2 (2004) | |
| BMGV: --- | Other information: --- | |

| **Chemical Name** | n-butyl acetate | Content %:1-2,5 |
|---|---|---|
| WEL-TWA: 150 ppm (724 mg/m3) (WEL), 50 ppm (241 mg/m3) (EU) | WEL-STEL: 200 ppm (966 mg/m3) (WEL), 150 ppm (723 mg/m3) (EU) | --- |
| Monitoring procedures: | - Compur - KITA-138 U (548 857)<br>- Compur - KITA-139 SB(C) (549 731)<br>- NIOSH 1450 (ESTERS 1) - 2003<br>- NIOSH 2549 (VOLATILE ORGANIC COMPOUNDS (SCREENING)) - 1996<br>OSHA 1009 (n-Butyl Acetate Isobutyl Acetate sec-Butyl Acetate tert-Butyl Acetate) -<br>- 2007 | |
| BMGV: --- | Other information: --- | |

| **Chemical Name** | Isopropyl acetate | Content %:1-2,5 |
|---|---|---|
| WEL-TWA: --- | WEL-STEL: 200 ppm (849 mg/m3) | --- |
| Monitoring procedures: | - Compur - KITA-111 U (549 178)<br>- Compur - KITA-139 SB(C) (549 731)<br>NIOSH 1454 (Isopropyl acetate) - 2003 - EU project BC/CEN/ENTR/000/2002-16 card<br>- 14-4 (2004)<br>- NIOSH 1460 (ISOPROPYL ACETATE) - 2003 | |
| BMGV: --- | Other information: --- | |

| **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: --- | |

| **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: --- | |

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

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

| Area of application | Exposure route / Environmental compartment | Effect on health | Descriptor | Value | Unit | Note |
|---|---|---|---|---|---|---|
| Consumer | Human - dermal | Long term, systemic effects | DNEL | 699 | mg/kg bw/day | |
| Consumer | Human - inhalation | Long term, systemic effects | DNEL | 608 | mg/m3 | |
| Consumer | Human - oral | Long term, systemic effects | DNEL | 699 | mg/kg bw/day | |
| Workers / employees | Human - dermal | Long term, systemic effects | DNEL | 773 | mg/kg bw/day | |
| Workers / employees | Human - dermal | Long term, systemic effects | DNEL | 300 | mg/kg bw/day | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Workers / employees | Human - inhalation | Long term, systemic effects | DNEL | 2035 | mg/m3 | |

**Ethanol**

| Area of application | Exposure route / Environmental compartment | Effect on health | Descriptor | Value | Unit | Note |
|---|---|---|---|---|---|---|
| | Environment - freshwater | | PNEC | 0,96 | mg/l | |
| | Environment - marine | | PNEC | 0,79 | mg/l | |
| | Environment - water, sporadic (intermittent) release | | PNEC | 2,75 | mg/l | |
| | Environment - sewage treatment plant | | PNEC | 580 | mg/l | |
| | Environment - sediment, freshwater | | PNEC | 3,6 | mg/kg | |
| | Environment - soil | | PNEC | 0,63 | mg/kg dry weight | |
| | Environment - oral (animal feed) | | PNEC | 0,38 | g/kg feed | |
| | Environment - sediment, marine | | PNEC | 2,9 | mg/kg dry weight | |
| Consumer | Human - dermal | Short term, local effects | DNEL | 950 | mg/m3 | |
| Consumer | Human - inhalation | Long term, systemic effects | DNEL | 114 | mg/m3 | |
| Consumer | Human - oral | Long term, systemic effects | DNEL | 87 | mg/kg | |
| Consumer | Human - dermal | Long term, systemic effects | DNEL | 206 | mg/kg bw/d | |
| Consumer | Human - inhalation | Short term, local effects | DNEL | 950 | mg/m3 | |
| Workers / employees | Human - dermal | Long term, systemic effects | DNEL | 343 | mg/kg bw/d | |
| Workers / employees | Human - inhalation | Long term, systemic effects | DNEL | 950 | mg/m3 | |
| Workers / employees | Human - inhalation | Short term, local effects | DNEL | 1900 | mg/m3 | |

**n-butyl acetate**

| Area of application | Exposure route / Environmental compartment | Effect on health | Descriptor | Value | Unit | Note |
|---|---|---|---|---|---|---|
| | Environment - freshwater | | PNEC | 0,18 | mg/l | |
| | Environment - marine | | PNEC | 0,018 | mg/l | |
| | Environment - periodic release | | PNEC | 0,36 | mg/l | |
| | Environment - sediment, freshwater | | PNEC | 0,981 | mg/kg | |
| | Environment - sediment, marine | | PNEC | 0,0981 | mg/kg | |
| | Environment - soil | | PNEC | 0,0903 | mg/kg | |
| | Environment - sewage treatment plant | | PNEC | 35,6 | mg/l | |
| Consumer | Human - dermal | Long term, systemic effects | DNEL | 6 | mg/kg bw/d | |
| Consumer | Human - inhalation | Short term, systemic effects | DNEL | 300 | mg/m3 | |
| Consumer | Human - inhalation | Long term, systemic effects | DNEL | 35,7 | mg/m3 | |
| Consumer | Human - inhalation | Short term, local effects | DNEL | 300 | mg/m3 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Consumer | Human - inhalation | Long term, local effects | DNEL | 35,7 | mg/m3 | |
| Consumer | Human - dermal | Short term, systemic effects | DNEL | 6 | mg/kg bw/day | |
| Consumer | Human - oral | Long term, systemic effects | DNEL | 2 | mg/kg bw/day | |
| Consumer | Human - oral | Short term, systemic effects | DNEL | 2 | mg/kg bw/day | |
| Workers / employees | Human - inhalation | Short term, systemic effects | DNEL | 600 | mg/m3 | |
| Workers / employees | Human - inhalation | Long term, systemic effects | DNEL | 300 | mg/m3 | |
| Workers / employees | Human - dermal | Long term, systemic effects | DNEL | 11 | mg/kg bw/d | |
| Workers / employees | Human - dermal | Short term, systemic effects | DNEL | 11 | mg/kg bw/day | |
| Workers / employees | Human - inhalation | Short term, local effects | DNEL | 600 | mg/m3 | |
| Workers / employees | Human - inhalation | Long term, local effects | DNEL | 300 | mg/m3 | |

| **Isopropyl acetate** | | | | | | |
|---|---|---|---|---|---|---|
| **Area of application** | **Exposure route / Environmental compartment** | **Effect on health** | **Descriptor** | **Value** | **Unit** | **Note** |
| | Environment - freshwater | | PNEC | 0,22 | mg/l | |
| | Environment - marine | | PNEC | 0,022 | mg/l | |
| | Environment - soil | | PNEC | 0,35 | mg/kg bw/d | |
| | Environment - sewage treatment plant | | PNEC | 190 | mg/l | |
| Consumer | Human - oral | Long term, systemic effects | DNEL | 26 | mg/kg body weight/day | |
| Consumer | Human - dermal | Long term, systemic effects | DNEL | 26 | mg/kg body weight/day | |
| Consumer | Human - inhalation | Long term, systemic effects | DNEL | 252 | mg/m3 | |
| Workers / employees | Human - inhalation | Long term, systemic effects | DNEL | 420 | mg/m3 | |
| Workers / employees | Human - dermal | Long term, systemic effects | DNEL | 43 | mg/kg body weight/day | |

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 374).
If applicable
Protective nitrile gloves (EN 374).
Protective gloves made of fluorocarbon rubber (EN 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:
Normally not necessary.
If OES or MEL is exceeded.
Filter A P2 (EN 14387), code colour brown, white
At high concentrations:
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: | Colourless |
| Odour: | Characteristic |
| Odour threshold: | Not determined |
| pH-value: | n.a. |
| Melting point/freezing point: | Not determined |

| | |
|---|---|
| Initial boiling point and boiling range: | n.a. |
| Flash point: | n.a. |
| Evaporation rate: | n.a. |
| Flammability (solid, gas): | n.a. |
| Lower explosive limit: | 1 Vol-% |
| Upper explosive limit: | 15 Vol-% |
| Vapour pressure: | 5600 hPa (20°C) |
| Vapour density (air = 1): | Vapours heavier than air. |
| Density: | 0,66 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: | >200 °C (Ignition temperature ) |
| Auto-ignition temperature: | No |
| Decomposition temperature: | Not determined |
| Viscosity: | Not determined |
| Explosive properties: | Product is not explosive. When using: development of explosive vapour/air mixture possible. |
| Oxidising properties: | No |

### 9.2 Other information

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

## 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).

| **Gewebeimpraegnierung** | | | | | | |
|---|---|---|---|---|---|---|
| **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. |

**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 | >20 | mg/l/4h | Rat | OECD 403 (Acute Inhalation Toxicity) | |
| Skin corrosion/irritation: | | | | Rabbit | OECD 404 (Acute Dermal Irritation/Corrosion) | Skin Irrit. 2 |
| 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) |
| Carcinogenicity: | | | | | | Negative |
| Reproductive toxicity: | | | | | OECD 414 (Prenatal Developmental Toxicity Study) | Analogous conclusion, Negative |
| Specific target organ toxicity - single exposure (STOT-SE): | | | | | | STOT SE 3, H336 |
| Specific target organ toxicity - repeated exposure (STOT-RE): | | | | | | Negative |
| Aspiration hazard: | | | | | | Yes |
| Symptoms: | | | | | | drowsiness, unconsciousness, heart/circulatory disorders, headaches, cramps, drowsiness, mucous membrane irritation, dizziness, nausea and vomiting. |
| Specific target organ toxicity - single exposure (STOT-SE), inhalative: | | | | | | Not irritant (respiratory tract). |

**Hydrocarbons, C10-C12, isoalkanes, <2% aromatics**

| 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: | LC50 | >5000 | mg/m3/8h | Rat | OECD 403 (Acute Inhalation Toxicity) | Vapours |
| Skin corrosion/irritation: | | | | | OECD 404 (Acute Dermal Irritation/Corrosion) | Not irritant, Repeated exposure may cause skin dryness or cracking. |

| | | | | | | |
|---|---|---|---|---|---|---|
| Serious eye damage/irritation: | | | | | OECD 405 (Acute Eye Irritation/Corrosion) | Not irritant |
| Respiratory or skin sensitisation: | | | | Guinea pig | OECD 406 (Skin Sensitisation) | No (skin contact) |
| Germ cell mutagenicity: | | | | | OECD 471 (Bacterial Reverse Mutation Test) | Negative, Analogous conclusion |
| Carcinogenicity: | | | | | OECD 453 (Combined Chronic Toxicity/Carcinogenicity Studies) | Negative, Analogous conclusion |
| Reproductive toxicity: | | | | | OECD 414 (Prenatal Developmental Toxicity Study) | Negative, Analogous conclusion |
| Specific target organ toxicity - repeated exposure (STOT-RE): | | | | | OECD 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents) | Negative, Analogous conclusion |
| Aspiration hazard: | | | | | | Yes |

**Ethanol**

| Toxicity / effect | Endpoint | Value | Unit | Organism | Test method | Notes |
|---|---|---|---|---|---|---|
| Acute toxicity, by oral route: | LD50 | 10470 | mg/kg | Rat | OECD 401 (Acute Oral Toxicity) | |
| Acute toxicity, by dermal route: | LD50 | >2000 | mg/kg | Rabbit | OECD 402 (Acute Dermal Toxicity) | |
| Acute toxicity, by inhalation: | LC50 | 124,7 | mg/l/4h | Rat | OECD 403 (Acute Inhalation Toxicity) | Vapours |
| Skin corrosion/irritation: | | | | Rabbit | OECD 404 (Acute Dermal Irritation/Corrosion) | Not irritant |
| Serious eye damage/irritation: | | | | Rabbit | OECD 405 (Acute Eye Irritation/Corrosion) | Irritant |
| Respiratory or skin sensitisation: | | | | Mouse | OECD 429 (Skin Sensitisation - Local Lymph Node Assay) | No (skin contact) |
| Germ cell mutagenicity: | | | | Salmonella typhimurium | OECD 471 (Bacterial Reverse Mutation Test) | Negative |
| Germ cell mutagenicity: | | | | Mouse | OECD 476 (In Vitro Mammalian Cell Gene Mutation Test) | Negative |
| Germ cell mutagenicity: | | | | | OECD 473 (In Vitro Mammalian Chromosome Aberration Test) | Negative |
| Germ cell mutagenicity: | | | | | OECD 475 (Mammalian Bone Marrow Chromosome Aberration Test) | Negative |
| Aspiration hazard: | | | | Human being | | No indications of such an effect. |

| | | | | | | |
|---|---|---|---|---|---|---|
| Symptoms: | | | | | | respiratory distress, drowsiness, unconsciousness, drop in blood pressure, vomiting, coughing, headaches, intoxication, drowsiness, mucous membrane irritation, dizziness, nausea |
| Other information: | | | | | | Excessive alcohol consumption during pregnancy induces the foetus alcohol syndrome (reduced weight at birth, physical and mental disorders)., There is no sign that this syndrome is also caused by dermal or inhalative absorption., Experiences on persons. |

**n-butyl acetate**

| Toxicity / effect | Endpoint | Value | Unit | Organism | Test method | Notes |
|---|---|---|---|---|---|---|
| Acute toxicity, by oral route: | LD50 | 10760 | mg/kg | Rat | OECD 423 (Acute Oral Toxicity - Acute Toxic Class Method) | |
| Acute toxicity, by dermal route: | LD50 | >14112 | mg/kg | Rabbit | OECD 402 (Acute Dermal Toxicity) | |
| Acute toxicity, by inhalation: | LC50 | 21,1 | mg/l/4h | Rat | OECD 403 (Acute Inhalation Toxicity) | Mist |
| Skin corrosion/irritation: | | | | Rabbit | OECD 404 (Acute Dermal Irritation/Corrosion) | Not irritant |
| Serious eye damage/irritation: | | | | Rabbit | OECD 405 (Acute Eye Irritation/Corrosion) | Not irritant |
| Respiratory or skin sensitisation: | | | | Guinea pig | OECD 406 (Skin Sensitisation) | No (skin contact) |
| Germ cell mutagenicity: | | | | Salmonella typhimurium | OECD 471 (Bacterial Reverse Mutation Test) | Negative |
| Reproductive toxicity: | NOAEC | 9640 | mg/m3 | | OECD 416 (Two-generation Reproduction Toxicity Study) | Negative |
| Specific target organ toxicity - single exposure (STOT-SE): | | | | | | Vapours may cause drowsiness and dizziness. |

| | | | | | | |
|---|---|---|---|---|---|---|
| Specific target organ toxicity - repeated exposure (STOT-RE): | | | | | | Negative |
| Symptoms: | | | | | | drowsiness, unconsciousness, headaches, drowsiness, mucous membrane irritation, dizziness, nausea and vomiting. |
| Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.: | NOAEC | 500 | ppm | Rat | | |
| Other information: | | | | | | Repeated exposure may cause skin dryness or cracking. |

**Isopropyl acetate**

| Toxicity / effect | Endpoint | Value | Unit | Organism | Test method | Notes |
|---|---|---|---|---|---|---|
| Acute toxicity, by oral route: | LD50 | 6750 | mg/kg | Rat | | |
| Acute toxicity, by dermal route: | LD50 | >20000 | mg/kg | Rabbit | | |
| Acute toxicity, by inhalation: | LC50 | 68-136 | mg/l | Rat | | |
| Skin corrosion/irritation: | | | | | | Repeated exposure may cause skin dryness or cracking. |
| Serious eye damage/irritation: | | | | Rabbit | | Irritant |
| Respiratory or skin sensitisation: | | | | Guinea pig | | Not sensitizising |
| Germ cell mutagenicity: | | | | | OECD 471 (Bacterial Reverse Mutation Test) | Negative |
| Aspiration hazard: | | | | | | No |
| Symptoms: | | | | | | lack of appetite, eyes, reddened, drowsiness, unconsciousness, cornea opacity, headaches, drowsiness, mucous membrane irritation, dizziness, nausea and vomiting. |

**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 |
| Aspiration hazard: | | | | | | No |

| | | | | | | |
|---|---|---|---|---|---|---|
| Symptoms: | | | | | | ataxia, breathing difficulties, drowsiness, unconsciousness, frostbite, disturbed heart rhythm, headaches, cramps, intoxication, dizziness, nausea and vomiting. |

| **Propane** | | | | | | |
|---|---|---|---|---|---|---|
| **Toxicity / effect** | **Endpoint** | **Value** | **Unit** | **Organism** | **Test method** | **Notes** |
| Acute toxicity, by inhalation: | LC50 | 658 | mg/l/4h | Rat | | |
| 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. |

| **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 Reverse Mutation Test) | Negative |
| Aspiration hazard: | | | | | | No |
| Symptoms: | | | | | | unconsciousness, frostbite, headaches, cramps, dizziness, nausea and vomiting. |

## SECTION 12: Ecological information

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

| **Gewebeimpraegnierung** | | | | | | | |
|---|---|---|---|---|---|---|---|
| **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: | | | | | | | Product is slightly volatile. |
| 12.5. Results of PBT and vPvB assessment | | | | | | | n.d.a. |
| 12.6. Other adverse effects: | | | | | | | n.d.a. |
| Other information: | | | | | | | According to the recipe, contains no AOX. |

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

| Toxicity / effect | Endpoint | Time | Value | Unit | Organism | Test method | Notes |
|---|---|---|---|---|---|---|---|
| 12.3. Bioaccumulative potential: | | | | | | | Concentration in organisms possible. |
| 12.1. Toxicity to daphnia: | NOEC/NOEL | 21d | 0,17 | mg/l | Daphnia magna | | |
| 12.1. Toxicity to daphnia: | LOEC/LOEL | 21d | 0,32 | mg/l | Daphnia magna | | |
| 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: | 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 | % | activated sludge | OECD 301 F (Ready Biodegradability - Manometric Respirometry Test) | Readily biodegradable, Analogous conclusion |
| 12.3. Bioaccumulative potential: | BCF | | 242-253 | | | | |
| 12.4. Mobility in soil: | | | | | | | Adsorption in ground., Product is slightly volatile. |
| Other information: | AOX | | 0 | % | | | |

**Hydrocarbons, C10-C12, isoalkanes, <2% aromatics**

| Toxicity / effect | Endpoint | Time | Value | Unit | Organism | Test method | Notes |
|---|---|---|---|---|---|---|---|
| 12.1. Toxicity to fish: | LL0 | 96h | 1000 | mg/l | Oncorhynchus mykiss | | |
| 12.1. Toxicity to fish: | LL50 | 96h | >1000 | mg/l | Oncorhynchus mykiss | OECD 203 (Fish, Acute Toxicity Test) | |
| 12.1. Toxicity to fish: | NOELR | 28d | 0,192 | mg/l | Oncorhynchus mykiss | QSAR | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 12.1. Toxicity to daphnia: | EL50 | 48h | >1000 | mg/l | Daphnia magna | OECD 202 (Daphnia sp. Acute Immobilisation Test) | |
| 12.1. Toxicity to daphnia: | EL0 | 48h | 1000 | mg/l | Daphnia magna | | |
| 12.1. Toxicity to algae: | EL0 | 72h | 1000 | mg/l | Pseudokirchneriella subcapitata | | |
| 12.2. Persistence and degradability: | | 28d | 31,3 | % | | OECD 301 F (Ready Biodegradability - Manometric Respirometry Test) | Not readily but inherent biodegradable. |
| 12.1. Toxicity to daphnia: | NOEC/NOEL | 21d | 0,025 | mg/l | Daphnia magna | OECD 211 (Daphnia magna Reproduction Test) | |
| 12.1. Toxicity to algae: | EL50 | 72h | >1000 | mg/l | Pseudokirchneriella subcapitata | OECD 201 (Alga, Growth Inhibition Test) | |
| Toxicity to bacteria: | EC50 | | 1 - 10 | mg/l | | | |
| Water solubility: | | | | | | | Insoluble |

**Ethanol**

| Toxicity / effect | Endpoint | Time | Value | Unit | Organism | Test method | Notes |
|---|---|---|---|---|---|---|---|
| 12.1. Toxicity to fish: | LC50 | 96h | 13000 | mg/l | Oncorhynchus mykiss | OECD 203 (Fish, Acute Toxicity Test) | |
| 12.1. Toxicity to fish: | NOEC/NOEL | 120h | 250 | mg/l | Brachydanio rerio | OECD 212 (Fish, Short- term Toxicity Test on Embryo and Sac-fry Stages) | |
| 12.1. Toxicity to daphnia: | LC50 | 48h | 12340 | mg/l | Daphnia magna | | |
| 12.1. Toxicity to daphnia: | NOEC/NOEL | 10d | 9,6 | mg/l | Ceriodaphnia spec. | | References |
| 12.1. Toxicity to algae: | EC50 | 72h | 275 | mg/l | Chlorella vulgaris | OECD 201 (Alga, Growth Inhibition Test) | |
| 12.2. Persistence and degradability: | | 28d | 97 | % | | OECD 301 B (Ready Biodegradability - Co2 Evolution Test) | Readily biodegradable |
| 12.3. Bioaccumulative potential: | Log Pow | | -0,32 | | | | Bioaccumulation is unlikely (LogPow < 1). |
| 12.3. Bioaccumulative potential: | BCF | | 0,66 - 3,2 | | | | |
| 12.4. Mobility in soil: | H (Henry) | | 0,000138 | | | | |
| 12.5. Results of PBT and vPvB assessment | | | | | | | No PBT substance, No vPvB substance |
| Toxicity to bacteria: | IC50 | 3h | >1000 | mg/l | activated sludge | OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation)) | Analogous conclusion |
| Other organisms: | NOEC/NOEL | | 280 | mg/l | Lemna gibba | OECD 201 (Alga, Growth Inhibition Test) | |

| n-butyl acetate | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Toxicity / effect** | **Endpoint** | **Time** | **Value** | **Unit** | **Organism** | **Test method** | **Notes** |
| 12.6. Other adverse effects: | | | | | | | Product floats on the water surface. |
| 12.1. Toxicity to fish: | LC50 | 96h | 18 | mg/l | Pimephales promelas | OECD 203 (Fish, Acute Toxicity Test) | |
| 12.1. Toxicity to daphnia: | EC50 | 48h | 44 | mg/l | Daphnia magna | OECD 202 (Daphnia sp. Acute Immobilisation Test) | |
| 12.1. Toxicity to daphnia: | NOEC/NOEL | 21d | 23 | mg/l | Daphnia magna | OECD 211 (Daphnia magna Reproduction Test) | |
| 12.1. Toxicity to algae: | EC50 | 72h | 397 | mg/l | Scenedesmus subspicatus | OECD 201 (Alga, Growth Inhibition Test) | |
| 12.1. Toxicity to algae: | NOEC/NOEL | 72h | 200 | mg/l | Desmodesmus subspicatus | | |
| 12.2. Persistence and degradability: | | 28d | 98 | % | | OECD 301 D (Ready Biodegradability - Closed Bottle Test) | Readily biodegradable |
| 12.3. Bioaccumulative potential: | Log Pow | | 1,85-2,3 | | | | Low |
| 12.5. Results of PBT and vPvB assessment | | | | | | | No PBT substance, No vPvB substance |
| Toxicity to bacteria: | EC10 | | 959 | mg/l | Pseudomonas putida | | |

| Isopropyl acetate | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Toxicity / effect** | **Endpoint** | **Time** | **Value** | **Unit** | **Organism** | **Test method** | **Notes** |
| 12.1. Toxicity to fish: | LC50 | 48h | 265 | mg/l | Leuciscus idus | | |
| 12.1. Toxicity to daphnia: | EC50 | 24h | 4150 | mg/l | Daphnia magna | OECD 202 (Daphnia sp. Acute Immobilisation Test) | |
| 12.1. Toxicity to algae: | IC5 | 8d | 165 | mg/l | Scenedesmus quadricauda | | |
| 12.3. Bioaccumulative potential: | Log Pow | | 1,03 | | | | 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 |
| Toxicity to bacteria: | EC5 | 16h | 190 | mg/l | Pseudomonas putida | | |
| Other information: | COD | | 1670 | mg/g | | | |
| Water solubility: | | | 18,9 | g/l | | | |

| 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
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: environmentally hazardous
Tunnel restriction code: D

## Transport by sea (IMDG-code)

14.2. UN proper shipping name:
AEROSOLS (HYDROCARBONS, C6-C7,HYDROCARBONS, C10-C12)

14.3. Transport hazard class(es): 2.1
14.4. Packing group: -
EmS: F-D, S-U
Marine Pollutant: Yes
14.5. Environmental hazards: environmentally hazardous

## Transport by air (IATA)

14.2. UN proper shipping name:
Aerosols, flammable

14.3. Transport hazard class(es): 2.1
14.4. Packing group: -
14.5. Environmental hazards: Not applicable

## 14.6. Special precautions for user

Persons employed in transporting dangerous goods must be trained.
All persons involved in transporting must observe safety regulations.
Precautions must be taken to prevent damage.

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

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 |
|---|---|---|---|
| E2 | | 200 | 500 |
| P3b | 11.1, 11.2 | 5000 (netto) | 50000 (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): 99,28 %

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

n.a.

Observe incident regulations.

### 15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

## SECTION 16: Other information

Revised sections: 3, 8
Employee training in handling dangerous goods is required.
These details refer to the product as it is delivered.
Employee instruction/training in handling hazardous materials is required.

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

| 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 2, H411 | Classification according to calculation procedure. |
| Aerosol 1, H222 | Classification according to calculation procedure. |
| Aerosol 1, H229 | Classification based on the form or physical state. |

The following phrases represent the posted Hazard Class and Risk Category Code (GHS/CLP) of the product and the constituents (specified in Section 2 and 3).
H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
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
Eye Irrit. — Eye irritation

## Any abbreviations and acronyms used in this document:

acc., acc. to according, according to

ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)
AOX Adsorbable organic halogen compounds
approx. approximately
Art., Art. no. Article number
ASTM ASTM International (American Society for Testing and Materials)
ATE Acute Toxicity Estimate
BAM Bundesanstalt für Materialforschung und -prüfung (Federal Institute for Materials Research and Testing, Germany)
BAuA Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (= Federal Institute for Occupational Health and Safety, Germany)
BSEF The International Bromine Council
bw body weight
CAS Chemical Abstracts Service
CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)
CMR carcinogenic, mutagenic, reproductive toxic
DMEL Derived Minimum Effect Level
DNEL Derived No Effect Level
dw dry weight
e.g. for example (abbreviation of Latin 'exempli gratia'), for instance
EC European Community
ECHA European Chemicals Agency
EEC European Economic Community
EINECS European Inventory of Existing Commercial Chemical Substances
ELINCS European List of Notified Chemical Substances
EN European Norms
EPA United States Environmental Protection Agency (United States of America)
etc. et cetera
EU European Union
EVAL Ethylene-vinyl alcohol copolymer
Fax. Fax number
gen. general
GHS Globally Harmonized System of Classification and Labelling of Chemicals
GWP Global warming potential
IARC International Agency for Research on Cancer
IATA International Air Transport Association
IBC (Code) International Bulk Chemical (Code)
IMDG-code International Maritime Code for Dangerous Goods
incl. including, inclusive
IUCLID International Uniform Chemical Information Database
IUPAC International Union for Pure Applied Chemistry
LC50 Lethal Concentration to 50 % of a test population
LD50 Lethal Dose to 50% of a test population (Median Lethal Dose)
LQ Limited Quantities
MARPOL International Convention for the Prevention of Marine Pollution from Ships
n.a. not applicable
n.av. not available
n.c. not checked
n.d.a. no data available
OECD Organisation for Economic Co-operation and Development
org. organic
PBT persistent, bioaccumulative and toxic
PE Polyethylene
PNEC Predicted No Effect Concentration
ppm parts per million
PVC Polyvinylchloride
REACH Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals)
REACH-IT List-No. 9xx-xxx-x No. is automatically assigned, e.g. to pre-registrations without a CAS No. or other numerical identifier. List Numbers do not have any legal significance, rather they are purely technical identifiers for processing a submission via REACH-IT.
RID Règlement concernant le transport International ferroviaire de marchandises Dangereuses (= Regulation concerning the International Carriage of Dangerous Goods by Rail)
SVHC Substances of Very High Concern
Tel. Telephone
UN RTDG United Nations Recommendations on the Transport of Dangerous Goods

| | |
|---|---|
| VOC | Volatile organic compounds |
| vPvB | very persistent and very bioaccumulative |
| wwt | wet weight |

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

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