# Wisapur®-star MK 702

## 1. Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

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| Trade Name | **Wisapur-star MK 702** |
| Item number | PUR 702<br>PUR 702.600 |
| BAG-Register number (CH) | CPID: 190955-18<br>UFI: 6390-Y0UK-A00A-50RS |

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

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|---|---|
| Relevant identified uses | Adhesive |
| Uses advised against | All applications that are not explained in this technical data sheet. |
| Field for application [SU] | SU22 – Commercial use: Public domain (administration, education, entertainment, services, trade) |

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

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|---|---|
| Supplier | **Wisabax AG**<br>Kleb- und Dichtstoffe |
| Address | Grossmatte 21 / Postfach<br>CH-6014 Luzern-Littau |
| Phone | +41 (0)41 250 18 18 |
| Email | info@wisabax.ch |
| URL | www.wisabax.ch |
| Information contact | Technical Dept. - Mr B. Wicki<br>Environment Dept. - Mrs E. Svets |

### 1.4 Emergency telephone number

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|---|---|---|
| **24h emergency number**<br>(just possible in switzerland) | **Tel. 145** |  |
| **Tox Info Suisse**<br>(ancient swiss toxicological infomations centre)<br>**For emergencies from all the countries**<br>24h accessible in german, french, italian oder english. For not urgent cases see www.toxinfo.ch. | **Tel. +41 (0)44 251 51 51** | |

## 2. Hazards identification

### 2.1 Classification of the substance or mixture according to (EC) Nr. 1272/2008 (CLP).

| Hazard class | Hazard category | Hazard warnings |
|---|---|---|
| Eye Irrit. | 2 | H319 Causes serious eye irritation. |
| STOT SE | 3 | H335 May cause respiratory irritation. |
| Skin Irrit. | 2 | H315 Causes skin irritation. |
| Resp. Sens. | 1 | H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| Skin Sens. | 1 | H317 May cause an allergic skin reaction. |
| Carc. | 2 | H351 May probably cause cancer. |
| STOT RE | 2 | H373 May cause damage to organs through prolonged or repeated exposure through inhalation (airways). |

**2.2 Labelling according to Regulation (EC) Nr. 1272/2008 (CLP)**

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|---|---|
| Pictograms(e) |   |
| Signal word(s) | **Danger** |
| Hazard warning(s) [H-statements] | H319 Causes serious eye irritation.<br>H335 May cause respiratory irritation.<br>H315 Causes skin irritation.<br>H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.<br>H317 May cause an allergic skin reaction.<br>H351 May probably cause cancer.<br>H373 May cause damage to organs through prolonged or repeated exposure through inhalation (airways). |
| Safety instruction(s) [P-statements] | P201 Obtain special instructions before use.<br>P260 Do not breathe vapour / aerosol.<br>P280 Wear protective gloves/protective clothing/eye protection/face protection.<br>P284 [In case of inadequate ventilation] wear respiratory protection.<br>P 302 + P352 IF ON SKIN: Wash with plenty of water/…<br>P304 + P340 IF INHALED: IF INHALED: Remove person to fresh air and keep comfortable for breathing.<br>P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.<br>P308 + P313 IF exposed or concerned: Get medical advice/attention. |
| Special marking(s) [EUH-Phrases] | EUH204 Contains isocyanates. May produce an allergic reaction.<br>In the EU applies: As from 24 August 2023 adequate training is required before industrial or professional use. |
| Contains | dibutyltin dilaurate<br>4,4′-methylene diphenyl diisocyanate<br>reaction mass of 4,4'-methylenediphenyldiisocyanate and o-(p-isocyanatobenzyl)phenylisocyanate<br>modified methylene diphenyl diisocyanate |

**2.3 Other hazards**

Persons suffering from allergic reactions to this product should avoid contact with de product.

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.
The mixture does not contain any PBT substance (PBT = persistent, bioaccumulative, toxic) or is not included under XIII of the regulation (EC) 1907/2006.

## 3. Composition/information on ingredients

**3.1 Substances**
This product is a mixture, for more see section 3.2.

**3.2 Description of the mixture**
Mixture of the following dangerous substances in quantities to be declared/relevant.

**Content: 5 % - < 15 %**

| | | |
|---|---|---|
| CAS No.: -<br>EG No.: 905-806-4<br>Index No.: -<br>Reg. No. (REACH): 01-2119457015-45-XXXX | **reaction mass of 4,4'-methylenediphenyldiisocyanate and o-(p-isocyanatobenzyl)phenylisocyanate**<br><br>SCL Skin Irrit. 2, H315: >=5%<br>SCL Eye Irrit. 2, H319: >=5%<br>SCL Resp. Sens. 1, H334: >=0.1%<br>SCL STOT SE 3, H335: >=5% | Acute Tox. 4, H332;<br>Skin Irrit. 2, H315;<br>Eye Irrit. 2, H319;<br>Skin Sens. 1, H317;<br>Resp. Sens. 1, H334;<br>STOT SE 3, H335;<br>Carc. 2, H351;<br>STOT RE 2, H373 |

**Content: 5 % - < 15 %**

| | | |
|---|---|---|
| CAS No.: 25686-28-6<br>EG No.: 500-040-3<br>Index No.: -<br>Reg. No. (REACH): 01-2119457013-49-XXXX | **modified methylene diphenyl diisocyanate**<br><br>SCL Skin Irrit. 2, H315: >=5%<br>SCL Eye Irrit. 2, H319: >=5%<br>SCL Resp. Sens. 1, H334: >=0.1%<br>SCL STOT SE 3, H335: >=5%<br>SCL ATE (inhalative, dust/fog): 1.5 mg/l/4h<br>SCL ATE (inhalative, vapours): 11 mg/l/4h | Skin Irrit. 2, H315;<br>Skin Sens. 1, H317;<br>Eye Irrit. 2, H319;<br>Acute Tox. 4, H332;<br>Resp. Sens. 1, H334;<br>STOT SE 3, H335;<br>Carc. 2, H351;<br>STOT RE 2, H373 |

**Content: 1 % - < 10 %**

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|---|---|---|
| CAS No.: 101-68-8<br>EG No.: 202-966-0<br>Index No.: 615-005-00-9<br>Reg. No. (REACH): 01-2119457014-47-XXXX | **4,4′-methylene diphenyl diisocyanate**<br><br>Further name(s):<br>diphenylmethane-4,4'-diisocyanate<br><br>SCL Skin Irrit. 2, H315: >=5%<br>SCL Eye Irrit. 2, H319: >=5%<br>SCL Resp. Sens. 1, H334: >=0.1%<br>SCL STOT SE 3, H335: >=5% | Carc. 2, H351;<br>Acute Tox. 4, H332;<br>STOT RE 2, H373;<br>Eye Irrit. 2, H319;<br>STOT SE 3, 335;<br>Skin Irrit. 2, H315;<br>Resp. Sens. 1, H334;<br>Skin Sens. 1, H317 |

**Content: 1 % - < 5 %**

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|---|---|---|
| CAS No.: 108-32-7<br>EG No.: 203-572-1<br>Index No.: 607-194-00-1<br>Reg. No. (REACH): 01-2119537232-48-XXXX | **propylene carbonate** | Eye Irrit. 2, H319<br>Substance with an occupational exposure limit (see section 8) |

**Content: 0.1 % - < 0.25 %**

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|---|---|---|
| CAS No.: 77-58-7<br>EG No.: 201-039-8<br>Index No.: 050-030-00-3<br>Reg. No. (REACH): 01-2119496068-27-XXXX | **dibutyltin dilaurate**<br><br>Further name(s):<br>dibutyltin dilaurate<br><br>SCL Repr. 1B: C>= 0.3%<br>M Factor Acute = 1; M Factor Chronic = 1 | Muta. 2, H341;<br>Eye Irrit. 2, H319;<br>Repr. 1B, H360FD;<br>STOT SE 1, H370;<br>STOT RE 1, H372;<br>Aquatic Acute 1, H400;<br>Aquatic Chronic 1, H410;<br>Skin Sens. 1, H317 |

Note: H-phrases and abbreviations are detailed in section 16.

## 4. First aid measures

**4.1 Description of first aid measures**

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|---|---|
| General information | Observe the general rules of first aid measures. Refresh occasionally your knowledge. If medical advice is required, have this safety data sheet, the packaging or the label ready. |
| Following inhalation | Remove affected person from the danger area. Supply fresh air. Loosen restrictive clothing. Place in a resting position. Consult a doctor depending on the symptoms. If not breathing provide immediately artificial respiration and obtain medical |

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| | treatment. In case of unconsciousness bring person in recovery position and take medical advice. |
| Following skin contact | Product residues remove mechanically, e.g.<br>Remove contaminated clothing immediately. Wash skin with much water and soap. Consult a doctor depending ond the symptoms, if possible, show this container or label.<br>If there is one, dab affected body areas with polyethylene glycol 400 (or similar non-hazardous polyol). |
| Following eye contact | Remove contact lenses, if present and easy to do.<br>Rinse thoroughly with water and consult a doctor. Present this safety data sheet or product label. |
| Following ingestion | Rinse mouth thoroughly with water. Keep airways free. Telephone the emergency number or consult a doctor. If it is possible, present this safety data sheet or product label. Do not induce vomiting! Drink plenty of water. Never give anything by mouth to an unconscious person. |

**4.2 Most important symptoms and effects, both acute and delayed**
It may, in particular trough prolonged or repeated exposure the following symptoms may occur.
Dermatitis (inflammation), desiccation of the skin, allergic contact eczema, skin discolouration, Irritation in the nasal and pharyngeal mucous membranes, cough, Headaches, effects on the central nervous system, asthmatic symptoms, shortness of breath.
In certain cases, symptoms of intoxication may only appear after a longer period of time/after several hours.

**4.3 Indication of any immediate medical attention and special treatment needed**
Symptomatic treatment
In pulmonary irritation treat initially with dexamethasone metered-dose aerosol. Pulmonary edema prophylaxis.
Medical examinations required because delayed entering effective possible.

## 5. Firefighting measures

**5.1 Extinguishing media**
Always adapt firefighting measures to the surroundings and the size of the fire.

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| Suitable extinguishing media: Water spray jet, Dry powder fire extinguishers, Alcohol-resistant foam, Carbon dioxide |
| Unsuitable extinguishing media: Full water jet |

**5.2 Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire:
Carbon oxide (Carbon monoxide, ..), Nitrogen oxide (NOx), Isocyanat, Hydrocyanic acid (Hydrogen cyanide).
Risk of bursting when heated.

**5.3 Advice for fire-fighters**
Do not inhale combustion gases.
Wear breathing apparatus with own air supply. Wear full protection depending on fire class.
Use water spray to cool endangered containers.
Dispose contaminated fire extinguishing water according to official directives.

## 6. Accidental release measures

**6.1 Personal precautions, protective equipment and emergency procedures**
Arrange for sufficient air supply. Avoid eye and skin contact as well as inhalation. Keep away unnecessary people from the scene of an accident; ideally contrary to the wind direction. Wear protective clothing (see Section 8).

**6.2 Environmental precautions**
Avoid further leakage or release, if it's possible without risk. Do not empty into drains. Prevent surface and ground-water infiltration, as well as ground penetration.

**6.3 Methods and material for containment and cleaning up**
Absorb bigger quantities with fluid-binding material (e.g. universal binder, sand, diatomaceous earth, sawdust) and dispose of according to section 13.
Let stand for several days until no further reaction in an unsealed container. Keep moist. Do not close the container. CO2 formation in closed containers can print arise.

**6.4 Reference to other sections**
Personal protective equipment see section 8. Waste disposal see section 13.

## 7. Handling and storage

**7.1 Precautions for safe handling**
Ensure good ventilation. Avoid inhaling the vapors. If necessary suction measures at the workplace or on the processing machines required. With allergies, asthma and chronic respiratory diseases, no contact with products of this kind. Open and handle receptacle with care. Avoid eye and skin contact. Eating, drinking, smoking, as well as food-storage, is prohibited in workspace. Notes note on the packaging and current technical data sheet. Use working methods according to operating instructions. Avoid release into the environment. Put on appropriate protective equipment (see section 8). Wash contaminated clothing before reuse. General hygiene measures for the handling of chemicals are applicable. Wash hands before breaks and after work. Take off contaminated clothing and protective equipment before entering eating areas.

**7.2 Conditions for safe storage, including any incompatibilities**
Keep container tightly closed and in a well-ventilated place.
To avoid the unauthorized and children and kept in a safe place. Do not store warnings in corridors and stairwells. Store only in original container and keep locked up. Store this material from incompatible materials. Keep away from food, drink and animal feedingstuffs. Protect them from direct sunlight and heat. Store in a dry place. Protect the product against moisture.
Recommended storage temperature: +15°C - +25°C.

**7.3 Specific end uses**
Adhesive - See technical data sheet and the product imprint.

## 8. Exposure controls/personal protection

**8.1 Control parameters**

Components with limit values that require monitoring at the workplace:

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| **Isocyanate limit values**<br><br>General limit values for diisocyanates, polymeric isocyanate and reaction masses with isocyanates | CH: MAC: 0.005 ppm (0.02 mg/m$^3$) (measured as total NCO)<br>CH: STEL: 0.005 ppm (0.02 mg/m$^3$) (measured as total NCO)<br>CH: 10 µg/g (5 nmol/mmol) Kreatinin (4,4'-Diaminodiphenylmethan, U, b)<br>DE: TWA: 0.05 mg/m$^3$ (up to 31.12.2028) (calculated as MDI)<br>EU: TWA: 10 µg/m$^3$ (up to 31.12.2028) (measured as NCO, diisocyanates) (EU)<br>EU: TWA: 6 µg/m$^3$ (from the 01.01.2029) (measured as NCO, diisocyanates) (EU)<br>Peak Limitation – Exceedance Factor: 1,=2=(I) (calculated as MDI)<br>BLV: 10 µg/g Kreatinin (4,4'-Diaminodiphenylmethan, U, b), (4,4'-MDI)<br>Other information: DFG, H, Y (calculated as MDI) (AGW) / (diisocyanates) (EU)<br>AT: MAC-TWA / TRC-TWA: 0.005 ppm (0.05 mg/m$^3$) (4,4'-MDI)<br>AT: MAC-TWA: 10 µg/m3 (up to 31.12.2028) (measured as NCO, diisocyanates) (EU)<br>AT: MAC-TWA: 6 µg/m3 (from the 01.01.2029) (measured as NCO, diisocyanates) (EU)<br>AT: MAC-STV / TRC-ST: 0.01 ppm (0.1 mg/m$^3$) [8 x 5min. (Mow)] (4,4'-MDI)<br>The specific measurement methods must be agreed with the provider carrying out the measurements. |

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|---|---|
| CAS No.: -<br>EG No.: 905-806-4<br>Index No.: -<br>Reg. No. (REACH): 01-2119457015-45-XXXX | **reaction mass of 4,4'-methylenediphenyldiisocyanate and o-(p-isocyanatobenzyl)phenylisocyanate**<br><br>CH: MAC: 0.005 ppm (0.02 mg/m$^3$)<br>Mehr Informationen siehe **Isocyanat-Grenzwerte** unter Abschnitt 8.1 |

| | |
|---|---|
| CAS No.: 25686-28-6<br>EG No.: 500-040-3<br>Index No.: -<br>Reg. No. (REACH): 01-2119457013-49-XXXX | **modified methylene diphenyl diisocyanate**<br><br>CH: MAC: 0.005 ppm (0,02 mg/m$^3$)<br><br>Mehr Informationen siehe **Isocyanat-Grenzwerte** unter Abschnitt 8.1 |

| | |
|---|---|
| CAS No.: 101-68-8<br>EG No.: 202-966-0<br>Index No.: 615-005-00-9 | **4,4′-methylene diphenyl diisocyanate**<br><br>CH: MAC: 0.005 ppm (0.02 mg/m$^3$)<br>DE: TWA: 0.05 mg/m$^3$ E |

| | |
|---|---|
| Reg. No. (REACH): 01-2119457014-47-XXXX | Mehr Informationen siehe **Isocyanat-Grenzwerte** unter Abschnitt 8.1 |

| | |
|---|---|
| CAS No.: 108-32-7<br>EG No.: 203-572-1<br>Index No.: 607-194-00-1<br>Reg. No. (REACH): 01-2119537232-48-XXXX | **propylene carbonate**<br><br>CH: MAC: 6 ppm (25.5 mg/m$^3$)<br>DE: TWA: 2 ppm (8.5 mg/m$^3$) |

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|---|---|
| CAS No.: 77-58-7<br>EG No.: 201-039-8<br>Index No.: -<br>Reg. No. (REACH): 01-2119496068-27-XXXX | **dibutyltin dilaurate**<br><br>CH: MAC: 0.004 ppm (0.02 mg/m3 e) (alveolar fraction)<br>CH: STEL: 0.004 ppm (0.02 mg/m3) (inhalable fraction) |

MAK = Maximum Workplace Concentration (TLV = Threshold Limit Value)
CH It's a swiss limit, edited by SUVA. If there is no limit from SUVA it's a work place limit (AGW) from Germany or another European state.

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|---|---|
| CAS No.: -<br>EG No.: 905-806-4<br>Index No.: -<br>Reg. No. (REACH): 01-2119457015-45-XXXX | **reaction mass of 4,4'-methylenediphenyldiisocyanate and o-(p-isocyanatobenzyl)phenylisocyanate**<br>employee: DNEL: 0.05 mg/m$^3$ [inhalative, short-term, local effects];<br>employee: DNEL: 0.05 mg/kg [inhalative, long-term, local effects];<br>consumer: DNEL: 0.05 mg/m$^3$ [inhalative, short-term, local effects];<br>consumer: DNEL: 0.025 mg/m$^3$ [inhalative, long-term, local effects];<br>environment: PNEC: 37 µg/l [fresh water];<br>environment: PNEC: 0.37 µg/l [sea water];<br>environment: PNEC: 3.7 µg/l [water, sporadic release];<br>environment: PNEC: 1 mg/l [microorganisms in wastewater treatment plants];<br>environment: PNEC: 11.7 mg/kg [sediment, fresh water];<br>environment: PNEC: 1.17 mg/kg [sediment, seawater];<br>environment: PNEC: 2.33 mg/kg [soil] [24/Q2/4] |

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|---|---|
| CAS No.: 25686-28-6<br>EG No.: 500-040-3<br>Index No.: -<br>Reg. No. (REACH): 01-2119457013-49-XXXX | **modified methylene diphenyl diisocyanate**<br>employee: DNEL: 0.1 mg/m$^3$ [inhalative, short-term, systemic effects];<br>employee: DNEL: 28.7 mg/cm$^2$ [dermal exposure route, long-term, systemic effects];<br>employee: DNEL: 0.1 mg/m$^3$ [inhalative, short-term, local effects];<br>employee: DNEL: 0.05 mg/m$^3$ [inhalative, long-term, systemic effects];<br>employee: DNEL: 0.05 mg/m$^3$ [inhalative, long-term, local effects];<br>employee: DNEL: 50 mg/kg [dermal exposure route, short-term, systemic effects];<br>consumer: DNEL: 25 mg/kg [dermal exposure route, short-term, systemic effects];<br>consumer: DNEL: 20 mg/kg [oral, short-term, systemic effects];<br>consumer: DNEL: 17.2 mg/cm$^2$ [dermal exposure route, long-term, systemic effects];<br>consumer: DNEL: 0.05 mg/m$^3$ [inhalative, short-term, local effects];<br>consumer: DNEL: 0.025 mg/m$^3$ [inhalative, long-term, systemic effects]<br>consumer: DNEL: 0.025 mg/m$^3$ [inhalative, long-term, local effects];<br>consumer: DNEL: 0.05 mg/m$^3$ [inhalative, short-term, systemic effects]<br>environment: PNEC: 1 mg/l [microorganisms in wastewater treatment plants];<br>environment: PNEC: 0.0037 mg/l [fresh water];<br>environment: PNEC: 0.00037 mg/l [sea water];<br>environment: PNEC: 37 mg/l [freshwater (intermittent release)]<br>environment: PNEC: 11.7 mg/kg [sediment, fresh water];<br>environment: PNEC: 1.17 mg/kg [sediment, seawater];<br>environment: PNEC: 2.33 mg/kg [soil] [24/Q2/4] |

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|---|---|
| CAS No.: 101-68-8<br>EG No.: 202-966-0<br>Index No.: 615-005-00-9<br>Reg. No. (REACH): - | **4,4′-methylene diphenyl diisocyanate**<br>employee: DNEL: 50 mg/kg bw/d [dermal exposure route, short-term, systemic effects];<br>employee: DNEL: 0.1 mg/m$^3$ [inhalative, short-term, systemic effects]; |

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|---|---|
| | employee: DNEL: 28.7 mg/cm² [dermal exposure route, long-term, systemic effects];<br>employee: DNEL: 0.1 mg/m³ [inhalative, short-term, local effects];<br>employee: DNEL: 0.05 mg/m³ [inhalative, long-term, local effects];<br>employee: DNEL: 0.05 mg/m³ [inhalative, long-term, systemic effects];<br>consumer: DNEL: 25 mg/kg bw/d [dermal exposure route, short-term, systemic effects];<br>consumer: DNEL: 0.05 mg/m³ [inhalative, short-term, systemic effects];<br>consumer: DNEL: 20 mg/kg bw/d [oral, short-term, systemic effects];<br>consumer: DNEL: 17.2 mg/cm² [dermal exposure route, long-term, systemic effects];<br>consumer: DNEL: 0.05 mg/m³ [inhalative, short-term, local effects];<br>consumer: DNEL: 0.025 mg/m³ [inhalative, long-term, systemic effects];<br>consumer: DNEL: 0.025 mg/m³ [inhalative, long-term, local effects];<br>environment: PNEC: 11.7 µg/l [fresh water];<br>environment: PNEC: 1.17 mg/l [sea water];<br>environment: PNEC: 570.4 mg/kg [sediment, fresh water];<br>environment: PNEC: 57.04 mg/kg [sediment, seawater];<br>environment: PNEC: 2.33 mg/kg dw [soil];<br>environment: PNEC: 1 mg/l [microorganisms in wastewater treatment plants];<br>environment: PNEC: 37 mg/l [water, sporadic (intermittent) release] [24/Q2/4] |

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|---|---|
| CAS No.: 108-32-7<br>EG No.: 203-572-1<br>Index No.: 607-194-00-1<br>Reg. No. (REACH): 01-2119537232-48-XXXX | **propylene carbonate**<br>employee: DNEL: 20 mg/kg [dermal exposure route, long-term, systemic effects];<br>employee: DNEL: 20 mg/m³ [inhalative, long-term, local effects];<br>employee: DNEL: 70.53 mg/kg [inhalative, long-term, systemic effects];<br>employee: DNEL: 176 mg/m³ [inhalative, long-term, systemic effects];<br>consumer: DNEL: 10 mg/kg [dermal exposure route, long-term, systemic effects];<br>consumer: DNEL: 10 mg/m³ [inhalative, long-term, local effects];<br>consumer: DNEL: 10 mg/kg [oral, long-term, systemic effects];<br>consumer: DNEL: 17.4 mg/m³ [inhalative, long-term, systemic effects];<br>environment: PNEC: 9 mg/l [freshwater (intermittent release)];<br>environment: PNEC: 0.09 mg/l [sea water];<br>environment: PNEC: 0.9 mg/l [fresh water];<br>environment: PNEC: 0.083 mg/l [sediment, seawater];<br>environment: PNEC: 0,83 mg/l [sediment, fresh water];<br>environment: PNEC: 0.81 mg/l [soil];<br>environment: PNEC: 7400 mg/l [microorganisms in wastewater treatment plants] [24/Q2/4] |

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|---|---|
| CAS No.: 77-58-7<br>EG No.: 201-039-8<br>Index No.: -<br>Reg. No. (REACH): 01-2119496068-27-XXXX | **dibutyltin dilaurate**<br>employee: DNEL: 1 mg/kg [dermal exposure route, short-term, systemic effects];<br>employee: DNEL: 0.059 mg/m³ [inhalative, short-term, systemic effects];<br>employee: DNEL: 0.2 mg/kg [dermal exposure route, long-term, systemic effects];<br>employee: DNEL: 0.01 mg/m³ [inhalative, long-term, systemic effects];<br>consumer: DNEL: 0.5 mg/kg [dermal exposure route, short-term, systemic effects];<br>consumer: DNEL: 0.02 mg/m³ [inhalative, short-term, systemic effects];<br>consumer: DNEL: 0.01 mg/kg [oral, short-term, systemic effects];<br>consumer: DNEL: 0.08 mg/kg [dermal exposure route, long-term, systemic effects];<br>consumer: DNEL: 0.003 mg/m³ [inhalative, long-term, systemic effects];<br>consumer: DNEL: 0.002 mg/kg [oral, long-term, systemic effects];<br>environment: PNEC: 0.00463 mg/l [freshwater (intermittent release)];<br>environment: PNEC: 0.05 mg/kg [sediment, fresh water];<br>environment: PNEC: 0.000463 mg/l [fresh water];<br>environment: PNEC: 0.000046 mg/l [sea water];<br>environment: PNEC: 0.005 mg/kg [sediment, seawater];<br>environment: PNEC: 0.005 mg/kg [oral, feed];<br>environment: PNEC: 100 mg/l [microorganisms in wastewater treatment plants] [24/Q2/4] |

**8.2 Exposure controls**

**8.2.1 Appropriate engineering controls**
Ensure good ventilation, e.g. by local suction, general exhaust air.
Minimize the risk of inhalations of vapours.
If possible, work with completely self-contained equipment.
Comply with the workplace exposure limits.
If limits can't be adhered to, use appropriate respiratory protection.

**8.2.2 Personal protective equipment**

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| General data | Select personal protective equipment according to the CEN standards; discuss protective equipment with the supplier. |
| Eye/face protection | Safety glasses with side protection shield (EN 166). |
| Hand-/Body protection | Use chemical-resistant protective gloves according to EN 374. |
| Protective clothing | Wear suitable protective clothing, e.g long-sleeved clothes and safety shoes according to EN ISO 20345. |
| Respiratory protection | Normally not needed. Comply with the workplace exposure limits.<br>Use self-contained breathing apparatus. Filter A2 P2 according to EN 14387 (Colour code brown, white). Follow the wear time limits for breathing apparatus. |
| Hygiene measures | General hygiene measures for the handling of chemicals are applicable.<br>Do not eat, drink or smoke while at work. Wash hands before breaks and after work. |
| Thermal hazards | Not applicable. |

On the basis of the contents and our experience the following non-binding recommendations for the selection of the material of the protective gloves (minimum layer thickness: 0.4 mm):

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|---|---|
| Recommended glove material: | Nitrile rubber/Nitrile latex (NBR) |
| Inappropriate glove material: | Textile Materials |

The selection of suitable depends upon the material, and also upon the quality of the gloves. The degree of protection will vary from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the materials used for gloves cannot be predetermined; it is therefore necessary to check this before using the product.
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

**8.2.3 Environmental exposure controls**
More information that is detailed is not available yet.

## 9. Physical and chemical properties

**9.1 Information on basic physical and chemical properties**

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|---|---|
| Physical state | Pasty |
| Colour | beige |
| Density | 1.52 g/ml |
| Viscosity | 67‘000 – 93’000 mPa*s (25°C) |
| Odour | Characteristic |
| Odour threshold | Not determined |
| pH-level | Not determined |
| Melting point/freezing point | Not determined |
| Initial boiling point/boiling range | Not determined |
| Decomposition temperature | Not determined |
| Rate of evaporation | Not determined |
| Flashpoint | Not determined |
| Auto-ignition temperature | Not determined |
| Lower explosive limits | Not determined |
| Upper explosive limits | Not determined |
| Vapour pressure | Not determined |
| Vapour density (Air = 1) | Not determined |
| Explosive properties | The product is not explosive. |
| Oxidising properties | No |

**9.2 Other information**

| | |
|---|---|
| Solubility in / Miscibility with water. | Immiscible with water |
| Solubility in / Miscibility in | Not determined |
| Partition coefficient n-Octanol/Water | Not determined |
| Conductivity | Not determined |
| VOC-content (EU) | 0 % |
| VOC-content (CH) | 0 % |

## 10. Stability and reactivity

**10.1 Reactivity**
This product reacts with wate runder formation of foam. This product reacts with alcohol / Polyols.

**10.2 Chemical stability**
The product is stable when properly stored and handled.

**10.3 Possibility of hazardous reactions**
Exothermic reaction possible with in section 10.5 called incompatible materials.
$CO_2$

**10.4 Conditions to avoid**
Protect from humidity. Protect container from direct sun.
Polymerization possible at high temperatures.

**10.5 Incompatible materials**
Acids, Bases, Alcohols, Amines, Water.

**10.6 Hazardous decomposition products**
No decomposition if used according to specifications.
In case of fire or very high heat can i.a. the following hazardous decomposition products are formed:
Carbon oxide (Carbon monoxide, ..), Nitrogen oxide (NOx), Isocyanat, Hydrocyanic acid (Hydrogen cyanide).

## 11. Toxicological information

**11.1 Information on toxicological effects**

| | |
|---|---|
| Acute toxicity (oral) | Based on the available data, the classification criteria are not met. |
| Acute toxicity (dermal) | Based on the available data, the classification criteria are not met. |

| | |
|---|---|
| Acute toxicity (inhalativ) | ATE >20 mg/l/4h [Calculated value]<br>Based on the available data, the classification criteria are not met. |
| Corrosivity and irritation of the skin | H315 Causes skin irritation. |
| Eye damage/eye irritation | H319 Causes serious eye irritation. |
| Respiratory sensitisation | H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H335 May cause respiratory irritation. |
| Skin sensitisation | H317 May cause an allergic skin reaction. |
| Germ cell mutagenicity / Genotoxicity | Based on the available data, the classification criteria are not met.<br>See details of hazardous ingredients in section 11.2. |
| Carcinogenicity | H351 May probably cause cancer. |
| Reproduction toxicity | Based on the available data, the classification criteria are not met.<br>See details of hazardous ingredients in section 11.2. |
| Effect on and trough breast milk | Based on the available data, the classification criteria are not met.<br>See details of hazardous ingredients in section 11.2. |
| Specific target organ toxicity (single exposure) | H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H335 May cause respiratory irritation. |
| Specific target organ toxicity (repeated exposure) | H373 May cause damage to organs through prolonged or repeated exposure through inhalation (airways). |
| Aspiration hazard | H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H335 May cause respiratory irritation. |
| Symptoms | See details of hazardous ingredients in section 11.2. |
| General data | The exposure to the substance or mixture may cause adverse health effects. |

**11.2. Toxicological information of hazardous ingredients**

| | |
|---|---|
| CAS No.: -<br>EG No.: 905-806-4<br>Index No.: -<br>Reg. No. (REACH): 01-2119457015-45- XXXX | **reaction mass of 4,4'-methylenediphenyldiisocyanate and o-(p-isocyanatobenzyl)phenylisocyanate**<br>acute toxicity: LD50: >10000 mg/kg [oral, rat];<br>acute toxicity: LD50: >9400 mg/kg [dermal exposure route, rabbit];<br>acute toxicity: LC50: 0.49 mg/l/4h [inhalative, rat, fog, dust the EU classification may vary depending on the source or the variant of the substance];<br>corrosive/irritant effect on the skin: irritant [rabbit, OECD 404];<br>respiratory/skin sensitization: sensitising (inhalation, skin contact) [Guinea pig, OECD 400];<br>germ cell mutagenicity: negative [Salmonella typhimurium, (Regulation (EC) 440/2008 B.13/B.14 (REVERSE MUTATION TEST USING BACTERIA)];<br>germ cell mutagenicity: negative [rat, OECD 474 (Mammalian Erythrocyte Micronucleus Test)];<br>carcinogenicity: [rat, OECD 453, Carc. 2] [24/Q2/2] |

| | |
|---|---|
| CAS No.: 25686-28-6<br>EG No.: 500-040-3<br>Index No.: -<br>Reg. No. (REACH): 01-2119457013-49-XXXX | **modified methylene diphenyl diisocyanate**<br>acute toxicity: LD50: >2000 mg/kg [oral, rat, OECD 401, analogy reasoning];<br>acute toxicity: ATE: 11 mg/l/4h [inhalative, vapours];<br>acute toxicity: ATE: 1.5 mg/l/4h [inhalative, dust/fog];<br>corrosive/irritant effect on the skin: irritant [rabbit, OECD 404, Skin. Irrit. 2];<br>serious eye damage/irritation: irritant [rabbit, OECD 405, Skin. Irrit. 2];<br>respiratory/skin sensitization: irritant [Guinea pig, OECD 406, sensitising (skin contact)];<br>respiratory/skin sensitization: [mouse, OECD 405, inhalation];<br>germ cell mutagenicity: negative [OECD 471, Salmonella typhimurium, Regulation (EC) 440/2008 B.13/B.14 (Reverse Mutation Test using Bacteria)];<br>germ cell mutagenicity: negative [rat, OECD 474 (Mammalian Erythrocyte Micronucleus Test)];<br>specific target organ toxicity - single exposure (STOT SE): 0.2 mg/m$^3$ [NOEL: OECD 453 (Combined Chronic Toxicity/Carcinogenicity Studies)];<br>symptoms: tearing of the eyes, breathing difficulties, asthmatic complaints, cough [24/Q2/2] |

| | |
|---|---|
| CAS No.: 101-68-8<br>EG No.: 202-966-0<br>Index No.: 615-005-00-9<br>Reg. No. (REACH): - | **4,4′-methylene diphenyl diisocyanate**<br>acute toxicity: LD50: >2000 mg/kg [oral, rat, analogy reasoning];<br>acute toxicity: LD50: >9400 mg/kg [dermal exposure route, rabbit, OECD 402, analogy reasoning]; |

| | |
|---|---|
| | acute toxicity: LC50: 0.368 mg/l/4h [inhalative, rat, OECD 403, aerosol, the EU classification may vary depending on the source or the variant of the substance];<br>acute toxicity: LC50: 1.5 mg/l/4h [inhalative, aerosol];<br>acute toxicity: ATE: 1.5 mg/l/4h [inhalative, dust/fog];<br>acute toxicity: ATE: 11 mg/l/4h [inhalative, vapours];<br>corrosive/irritant effect on the skin: irritant [rabbit, OECD 404, Skin. Irrit. 2, analogy reasoning];<br>respiratory/skin sensitization: sensitising (inhalation) [Guinea pig];<br>respiratory/skin sensitization: sensitising (skin contact) [mouse, OECD 429, Skin. Sens. 1];<br>germ cell mutagenicity: negative [Salmonella typhimurium, OECD 471 (Bacterial Reverse Mutation Test), analogy reasoning];<br>germ cell mutagenicity: negative [rat, OECD 474 (Mammalian Erythrocyte Micronucleus Test)];<br>germ cell mutagenicity: negative [rat, OECD 489 (In Vivo Mammalian Alkaline Comet Assay)];<br>carcinogenicity: [rat, OECD 453 (Combined Chronic Toxicity/Carcinogenicity Studies), aerosol, analogy reasoning, Carc. 2];<br>reproductive toxicity: NOAEL, 4-12 mg/m$^3$ [rat, OECD 414 (Prenatal Developmental Toxicity Study), aerosol, analogy reasoning];<br>specific target organ toxicity - single exposure (STOT SE): may irritate the respiratory tract [inhalative];<br>specific target organ toxicity - repeated exposure (STOT RE): LOAEL, 1 mg/m$^3$ [rat, OECD 453 (Combined Chronic Toxicity/Carcinogenicity Studies), inhalative, analogy reasoning];<br>symptoms: shortness of breath, cough, mucous membrane irritation [24/Q2/2] |

| | |
|---|---|
| CAS No.: 108-32-7<br>EG No.: 203-572-1<br>Index No.: 607-194-00-1<br>Reg. No. (REACH): 01-2119537232-48-XXXX | **propylene carbonate**<br>acute toxicity: LD50: >5000 mg/kg [oral, rat, OECD 401];<br>acute toxicity: LD50: >2000 mg/kg [dermal exposure route, rabbit, OECD 402];<br>corrosive/irritant effect on the skin: non-irritant [rabbit, OECD 404];<br>serious eye damage/irritation: irritant [rabbit, OECD 405];<br>respiratory/skin sensitization: not sensitising [human];<br>germ cell mutagenicity: negative [OECD 471];<br>germ cell mutagenicity: negative [OECD 474];<br>germ cell mutagenicity: negative [OECD 482]<br>carcinogenicity: negative [mouse, OECD 451];<br>reproductive toxicity: NOAEL: 1000 mg/kg, negative [rat, OECD 414];<br>reproductive toxicity: NOAEL: 5000 mg/kg [rat, OECD 414];<br>aspiration hazard: no;<br>specific target organ toxicity - repeated exposure (STOT RE): NOEL: >5000 mg/kg [OECD 408];<br>specific target organ toxicity - repeated exposure (STOT RE): NOEC: 100 mg/m$^3$ [OECD 413, dust/fog];<br>symptoms: breathing difficulties, headaches, gastrointestinal complaints, dizziness, nausea [24/Q2/2] |

| | |
|---|---|
| CAS No.: 77-58-7<br>EG No.: 201-039-8<br>Index No.: -<br>Reg. No. (REACH): 01-2119496068-27-XXXX | **dibutyltin dilaurate**<br>acute toxicity: LD50: 2071 mg/kg [oral, rat, OECD 401];<br>acute toxicity: LD50: >2000 mg/kg [dermal exposure route, rat, OECD 402];<br>corrosive/irritant effect on the skin: corrosiv [rat];<br>serious eye damage/irritation: [rabbit, OECD 405, danger of serious eye damage];<br>respiratory/skin sensitization: sensitising [Guinea pig, OECD 406];<br>aspiration hazard: no;<br>germ cell mutagenicity: [Muta. 2];<br>carcinogenicity: NOAEL: 133 ppm [rat, analogy reasoning, keine Hinweise auf eine derartige Wirkung];<br>reproductive toxicity: NOAEL: 5 mg/kg [classification based on toxicological studies, Repr. 1B];<br>specific target organ toxicity - repeated exposure (STOT-RE): NOAEL: 0.3 mg/kg;<br>symptoms: shortness of breath, diarrhoea, cough, Krämpfe, mucous membrane irritation, nausea and vomiting [25/Q2/4] |

## 12. Ecological information

**12.1 Toxicity**

| | |
|---|---|
| Aquatic toxicity Germany (Self-classification) | WGK 1 Slightly hazardous to water |
| The product is not classified as dangerous for the environment. | |

**12.2 Persistence and degradability**
The product is not biodegradable.

**12.3 Bioaccumulative potential**
No information is available.

**12.4 Mobility in soil**
No information is available.

**12.5 Results of PBT and vPvB assessment**
See section 2.3.

**12.6 Other adverse effects**
Do not allow product to reach ground water, water course or sewag system.

**12.7 Additional ecotoxicological information**

| | |
|---|---|
| CAS No.: -<br>EG No.: 905-806-4<br>Index No.: -<br>Reg. No. (REACH): 01-2119457015-45-XXXX | **reaction mass of 4,4'-methylenediphenyldiisocyanate and o-(p-isocyanatobenzyl)phenylisocyanate**<br>acute toxicity, fish: LC50: >1000 mg/l/96h [OECD 203];<br>acute toxicity, daphnia: NOEC/NOEL: >10 mg/l/21d [Daphnia magna, OECD 211];<br>acute toxicity, daphnia: EC50: >1000 mg/l/24h [Daphnia magna, OECD 202];<br>acute bacteriotoxicity: EC50: >100 mg/l/3h [activated sludge];<br>persistence and degradability: 28d, 0% [OECD 302 C, Inherent Biodegradability – Modified MITI Test (II))];<br>bioaccumulative potential: BCF: 200, is not to be expected [24/Q2/2] |

| | |
|---|---|
| CAS No.: 25686-28-6<br>EG No.: 500-040-3<br>Index No.: -<br>Reg. No. (REACH): 01-2119457013-49-XXXX | **modified methylene diphenyl diisocyanate**<br>acute toxicity, fish: LC50: >1000 mg/l/96h [OECD 203];<br>acute toxicity, daphnia: NOEC/NOEL: >10mg/l/21d [Daphnia magna, OECD 211];<br>acute toxicity, algae: EC50: >1640 mg/l/72h [OECD 201];<br>persistence and degradability: 0%/28, non-biodegradable [OECD 302C];<br>bioaccumulative potential: BCF: 200, is not to be expected [OECD 305];<br>acute bacteriotoxicity: EC50: >100 mg/l/3h [OECD 209];<br>other information: Contains organically bound halogens, which can contribute to the AOX value in waste water. [24/Q2/2] |

| | |
|---|---|
| CAS No.:101-68-8<br>EG No.: 202-966-0<br>Index No.: 615-005-00-9<br>Reg. No. (REACH): - | **4,4'-methylene diphenyl diisocyanate**<br>acute toxicity, fish: LC50: >1000 mg/l/96h [Brachydanio rerio, OECD 203];<br>acute toxicity, daphnia: EC50: >1000 mg/l/24h [Daphnia magna, analogy reasoning];<br>acute toxicity, algae: NOEC/NOEL: 1640 mg/l/72h [Desmodesmus subspicatus, OECD 201, analogy reasoning];<br>acute toxicity, algae: EC50: 1.5 mg/l/72h [OECD 201];<br>persistence and degradability: 0%/28d, [OECD 302 C, slowly reacts with water at the boundary surface to form a solid, high-melting insoluble reaction product with the formation of $CO_2$. polyurea is inert and non-degradable according to experience to date;<br>bioaccumulative potential: Log Pow: 5.22, is to be expected;<br>bioaccumulative potential: BCF: 200/28d<br>acute bacteriotoxicity: EC50: >100 mg/l/3h [activated sludge, OECD 209, analogy reasoning];<br>acute toxicity, other organisms: NOEC/NOEL, >1000 mg/kg/14d [Lactuca sativa, OECD 208, analogy reasoning];<br>acute toxicity, other organisms: NOEC/NOEL, EC50: >1000 mg/kg/14d [Avena sativa, OECD 208, analogy reasoning];<br>annelid worm toxicity: EC50: >1000 mg/kg/14d [Eisenia foetida, OECD 207]; |

| | |
|---|---|
| | annelid worm toxicity: NOEC/NOEL: >1000 mg/kg/14d [Lumbricus terrestris, OECD 207, analogy reasoning];<br>mobility in soil: H (Henry): 0.0229 Pa*m$^3$/mol [Cyprinus Caprio, is not to be expected];<br>results of PBT and vPvB assessment: no PBT substance; no vPvB substance;<br>other information: does not contain organically bound . [24/Q2/2] |

| | |
|---|---|
| CAS No.: 108-32-7<br>EG No.: 203-572-1<br>Index No.: 607-194-00-1<br>Reg. No. (REACH): 01-2119537232-48-XXXX | **propylene carbonate**<br>acute toxicity, fish: LC50: >1000 mg/l/96h [Cyprinus caprio, 92/69/EC];<br>acute toxicity, daphnia: EC50: >1000 mg/l/48h [Daphnia magna, OECD 202];<br>acute toxicity, algae: EC50: >900 mg/l/72h [Desmodesmus subspicatus, OECD 201];<br>chronic toxicity, algae: NOEC: 900 mg/l;<br>persistence and degradability: 83.5-87.7 %/29d [OECD 301 B, easily biodegradable];<br>persistence and degradability: DOC 90%-100%/, easily biodegradable [OECD 301];<br>bioaccumulative potential: Log Pow: -0,41, is not to be expected;<br>results of PBT and vPvB assessment: no PBT substance, no vPvB substance;<br>acute bacteriotoxicity: EC10: 7400 mg/l/16h [Pseudomonas putida, DIN 38412 T. 8];<br>other information: AOX: 0% [25/Q2/2,4] |

| | |
|---|---|
| CAS No.: 77-58-7<br>EG No.: 201-039-8<br>Index No.: -<br>Reg. No. (REACH): 01-2119496068-27-*XXXX* | **dibutyltin dilaurate**<br>acute toxicity, fish: LC50: >3,1 mg/l/96h [Brachydanio rerio, OECD 203, Saturated solution];<br>acute toxicity, daphnia: EC50: 48h <1 mg/l [Daphnia magna, OECD 202, Saturated solution];<br>acute toxicity, algae: LC50: >1 mg/l/72h [Desmodesmus subspicatus, OECD 201];<br>persistence and degradability: 28d, 22%, poorly biodegradable [OECD 301 F];<br>bioaccumulative potential: BCF: 1.49-3.7 [OECD 305];<br>acute bacteriotoxicity: EC50: 1000 mg/l/3h [activated sludge, OECD 209] [24/Q2/2] |

| | |
|---|---|
| CAS No.: 7631-86-9<br>EG No.: 231-545-4<br>Index No.: -<br>Reg. No. (REACH): 01-2119379499-16-XXXX | **silicon dioxide**<br>acute toxicity, fish: LC0: >10000 mg/l/96h [Brachydanio rerio, OECD 203];<br>acute toxicity, daphnia: EC0: >1000 mg/l/24h [Daphnia magna, OECD 202];<br>acute toxicity, algae: ErC50: >10000 mg/l/72h [Scenedesmus Subspicatus, OECD 201];<br>persistence and degradability: does not apply to inorganic substances.<br>results of PBT and vPvB assessment: no PBT substance, no vPvB substance [24/Q2/2] |

| | |
|---|---|
| CAS No.: 471-34-1<br>EG No.: 207-439-9<br>Index No.: -<br>Reg. No. (REACH): - | **calcium carbonate**<br>acute toxicity, fish: LC50: >100 mg/l/96h [Oncorhynchus mykiss, OECD 203];<br>acute toxicity, fish: LC50: >1000 mg/l/48h [Oncorhynchus mykiss, OECD 203];<br>acute toxicity, daphnia: EC50: >1 mg/l/48h [Daphnia magna];<br>acute toxicity, algae: EC50: >200 mg/l/72h [Desmodesmus subspicatus];<br>acute toxicity, algae: EC50: >14 mg/l/72h [Desmodesmus subspicatus, OECD 201];<br>persistence and degradability: does not apply to inorganic substances;<br>bioaccumulative potential: is not to be expected;<br>acute bacteriotoxicity: EC50: >1000 mg/l/3h [activated sludge, OECD 209];<br>acute bacteriotoxicity: NOEC/NOEL: 1000 mg/l/3h [activated sludge, OECD 209];<br>other organisms: EC50: >1000 mg/kg dw /21d [Glycine max, OECD 208];<br>other organisms: EC50: >1000 mg/kg dw /21d [Lycopersicon esculentum, OECD 208];<br>other organisms: EC50: >1000 mg/kg dw /21d [Avena sativa, OECD 208];<br>other organisms: NOEC/NOEL: 1000 mg/kg dw /21d [Glycine max, OECD 208];<br>other organisms: NOEC/NOEL: 1000 mg/kg dw /21d [Lycopersicon esculentum, OECD 208];<br>other organisms: NOEC/NOEL: 1000 mg/kg dw /21d [Avena sativa, OECD 208];<br>other organisms: EC50: >1000 mg/kg dw/14d [Eisenia foetida, OECD 207]; |

| | |
|---|---|
| | other organisms: NOEC/NOEL: 1000 mg/kg dw/14d [Eisenia foetida, OECD 207];<br>other organisms: EC50: >1000 mg/kg dw/28d [OECD 216];<br>other organisms: NOEC/NOEL: 1000 mg/kg dw/28d [OECD 216];<br>water solubility: 0.0166 g/l [OECD 105, 20°C]<br>persistence and degradability: does not apply to inorganic substances;<br>mobility in soil: n.a.;<br>results of PBT and vPvB assessment: does not apply to inorganic substances<br>[25/Q2/5] |

## 13. Disposal considerations

**13.1 Waste treatment methods**

Waste disposal according to official state regulations.

| |
|---|
| Waste treatment options:<br>08 04 09 – Waste adhesives and sealants containing organic solvents or other dangerous substances.<br>08 05 01 – waste isocyanates |
| Contaminated packages:<br>Disposal must be made according to official regulations. If possible empty packaging completely.<br>CH: After complete hardening, product can be disposed of with domestic waste.<br>Packagings that cannot be cleaned are to be disposed off in the same manner as the product.<br>Alternatively, it can be used if necessary following waste code: 15 01 10 – Packing that contains the residues of hazardous materials or is contaminated through hazardous materials. |
| • The waste code numbers mentioned are recommendations based on the probable use of the product. The particular application and local disposal situation obtaining for the user may lead to other waste codes being assigned as well.<br>• Switzerland: Following regulation in the latest valid constitution must be observed: Technical regulation on waste (TVA, SR 814.600), regulation for waste processing (VeVa, SR 814.610) and in the regulation of UVEK concerning lists for handling waste (LVA, SR 814.610.1). |

## 14. Transport information

**14.1 UN-Number:**
ADR, RID, ADN, IMDG, IATA: Not applicable

**14.2 UN proper shipping name**
ADR, RID, ADN, IMDG, IATA: Not applicable

**14.3 Transport hazard class(es):**

| | |
|---|---|
| ADR, RID, ADN, IMDG, IATA: Not applicable | |

**14.4 Packing group:**
ADR, RID, ADN, IMDG, IATA: Not applicable

**14.5 Enviromental hazards:**
Dangerous to the environment: No
Marine pollutant: No

**14.6 Special precautions for user:**

| | |
|---|---|
| Kemmler number: | Not applicable |
| EMS number: | Not applicable |

**14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:** Inapplicable

**14.8 Additional information:**

| | |
|---|---|
| ADR: LQ – Limited Quantities: | Not applicable |
| ADR: Transport category: | Not applicable |
| ADR: Tunnel restriction code: | Not applicable |
| UN „Model Regulation“: | Inapplicable |

## 15. Regulatory information

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

Classification and labelling see section 2.
The classification is based on the calculation method, unless otherwise stated.

Further national and further regulations, limitations and legal requirements

| |
|---|
| VOC content according to swiss VOC regulation (VOCV) see section 9.2. |
| Water hazard class (WGK) see section 12.1. |
| Observe employment restrictions for young people (CH: SR 822.115). |
| Observe Mutterschutzgesetz (DE) bzw. Mutterschutzverordnung (CH: SR 822.111.52). |
| Chemicals regulation (ChemV), ordinance on chemicals risk reduction (ChemRRV), Luftreinhalte-Verordnung (LRV), Ordinance on protection against major accidents (StFV), professional association principles/industrial medicine regulations |

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

## 16. Other information

**Hazards used in the document (H-phrases):**

| |
|---|
| H314 Causes severe skin burns and eye damage. |
| H315 Causes skin irritation. |
| H317 May cause an allergic skin reaction. |
| H319 Causes serious eye irritation. |
| H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| H332 Harmful if inhaled. |
| H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| H335 May cause respiratory irritation. |
| H341 Suspected of causing genetic defects. |
| H351 May probably cause cancer. |
| H360FD May impair fertility. May cause harm to the unborn child. |
| H370 Causes damage to organs. |
| H372 Causes damage to organs through prolonged or repeated exposure. |
| H373 May cause damage to organs through prolonged or repeated exposure through inhalation (airways). |
| H400 Very toxic to aquatic life. |
| H410 Very toxic to aquatic life with long lasting effects. |

**Other recommended sources for more information:**
- Federal Office of Public Health (Switzerland): www.bag.admin.ch (German/French/Italian/English)

**List of relevant abbreviations that may be used in the document:**

| Abbreviation | Full text / Meaning |
|---|---|
| ADR | Accord européen realtif au transport international des marchandises Dangereuses par Route (= European agreement concerning the international carriage of dangerouse goods by road) |
| AGW, Spb.-Üf. | AGW = Arbeitsplatzgrenzwert (occupational limit value), Spb.-Üf. = Spitzenbegrenzung (peak limit) – Überschreitungsfaktor (exceedance factor) (1 bis 8) and category (I, II) for short-term values (TRGS 900, germany) |
| AOEL | Acceptable Operator Exposure Level |
| Aquatic Acute | Hazardous to the aquatic environment - Acute |
| Aquatic Chronic | Hazardous to the aquatic environment – Chronic |
| Asp. Tox. | Aspiration hazard (Danger when inhaling) |
| ATE | Acute Toxicity Estimates |
| BAG | Office for health (Bundesamt für Gesundheit, Schweiz) |
| BAT | Biological tolerance values at the workplace (Biologische Arbeitsstofftoleranzwerte, Schweiz) |
| BG | Trade association (Berufsgenossenschaft) |
| BGR | Trade association regulations (Berufsgenossenschaftliche Regeln) |
| BGV | Trade association regulations (Berufsgenossenschaftliche Vorschrift) |
| Carz. | Carcinogenic substance |
| CAS-Nr. | Chemical Abstracts Service |
| CH | Swiss confederation (from the latin Confoederatio Helvetica) |
| CH: MAK: | Swiss limit of maximum allowable concentration, issued by the swiss accident insurance fund. (Schweizerischen Unfallversicherungsanstalt (SUVA) |
| CLP | Classification, Labelling and Packaing (REGULATION (EG) Nr. 1272/2008) |
| CPID | Chemical Product IDentification. |
| DMEL | Derived Minimum Effect Level |

| | |
|---|---|
| DNEL | Derived No Effect Level |
| EG-Nr. | Substances of the EC material inventory, consisting of 7 digits (Syntax: XXX-XXX-X). Comprises waste materials (EINECS), new substances (ELINCS) as well as the No-Longer-Polymers-Liste (NLP-Liste). |
| EINECS | European Inventory of Existing Commercial Chemical Substances |
| ELINCS | European List of Notified Chemical Substances |
| Eye Irrit. | Eye irritant, depending on the category Eye irritation possible to serious eye damage. |
| Flam. Gas | Flammable gas |
| Flam. Liq. | Flammable liquid |
| Flam. Sol. | Flammable solid |
| GHS | Globally Harmonized System of Classification and Labelling of Chemicals |
| IATA | International Air Transport Association |
| IMDG-Code | International Maritime Code for Dangerous Goods |
| Index-Nr. | Indexation of dangerous substances of appendix 5 in the VO(EG)1272/2008 (or annex I of directive 67/548/EWG) with the following syntax: XXX-XXX-XX-X |
| LC | Lethal concentration |
| LD | Lethal (fatal) dose |
| LD50 | Lethal dose, 50% |
| Met. Corr. | On metal corrosive acting substance or mixture |
| Muta. | Substance with germ cell mutagenicity |
| NOAEL | No Observed Adverse Effect Level |
| NOEC | No Observed Effect Concentration |
| NOEL | No Observed Effect Level |
| Ozone | Hazardous for the ozone layer |
| PBT | Persistent, bioaccumulative, and toxic |
| PNEC | Predicted No Effect Concentration |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals (Verordnung (EG) Nr. 1907/2006 zur Registrierung, Bewertung, Zulassung und Beschränkung chemischer Stoffe) |
| Repr. | Reproductive toxicity |
| Resp. Sens. | Sensitising for respiratory tract |
| SCL | Specific concentration limits |
| Skin Irrit. | Skin irritant – corrosive/irritant to skin |
| Skin Sens. | Sensitising for the skin |
| STOT RE | Specific target organ toxicity – repeated exposure |
| STOT SE | Specific target organ toxicity – single exposure |
| TRGS | Technical rules on hazardous substances |
| VOC | Volatile organic compounds |
| VOCV | VOC-regulation (Swiss) |
| vPvB | Very persistent and very bioaccumulative |

**Department issuing data specification sheet: See section 1.3.**
This safety data sheet replaces all previous versions.

**Disclaimer:** The specifications rest on the today's stand of our knowledge. It does not constitute a legally binding assurance of specific product properties.

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