# Safety Data Sheet according to (EC) No 1907/2006 as amended



SDS No. : 75915
V019.1

TEROSON PU 9100 WH

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Replaces version from: 23.02.2024

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

**1.1. Product identifier**
TEROSON PU 9100 WH

**1.2. Relevant identified uses of the substance or mixture and uses advised against**
Intended use:
adhesive and sealant

**1.3. Details of the supplier of the safety data sheet**
Henkel AG & Co. KGaA
Henkelstr. 67
40589 Düsseldorf

Germany

Phone: +49 211 797 0

SDSinfo.Adhesive@henkel.com
For Safety Data Sheet updates please visit our website https://mysds.henkel.com/index.html#/appSelection or www.henkel-adhesives.com.

**1.4. Emergency telephone number**
The Henkel information service also provides an around-the-clock telephone service on phone no.+49-(0)211-797-3350 for exceptional cases.

## SECTION 2: Hazards identification

**2.1. Classification of the substance or mixture**

**Classification (CLP):**

| | |
|---|---|
| Skin irritation | Category 2 |
| H315 Causes skin irritation. | |
| Serious eye irritation | Category 2 |
| H319 Causes serious eye irritation. | |
| Respiratory sensitizer | Category 1 |
| H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. | |
| Skin sensitizer | Category 1 |
| H317 May cause an allergic skin reaction. | |
| Specific target organ toxicity - single exposure | Category 3 |
| H335 May cause respiratory irritation. | |
| Target organ: respiratory tract irritation | |
| Specific target organ toxicity - repeated exposure | Category 2 |
| H373 May cause damage to organs through prolonged or repeated exposure. | |

**2.2. Label elements**

**Label elements (CLP):**

**Hazard pictogram:**

**Contains**

Oxirane, methyl-, polymer with oxirane, ether with 1,2,3-propanetriol (3:1), polymer with 1,1'-methylenebis[4-isocyanatobenzene]

4,4'- methylenediphenyl diisocyanate

Hexane, 1,6-diisocyanato-, homopolymer, V=7000-11000 mPas/23
dibutyltin dilaurate

4-isocyanatosulphonyltoluene

**Signal word:** Danger

**Hazard statement:**

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.
H335 May cause respiratory irritation.
H373 May cause damage to organs through prolonged or repeated exposure.

**Supplemental information**

As from 24 August 2023 adequate training is required before industrial or professional use.
Further information: https://www.feica.eu/PUinfo
Warning! Hazardous respirable dust may be formed when used. Do not breathe dust.

**Precautionary statement: Prevention**

P260 Do not breathe dust/fume/spray.
P280 Wear protective gloves/eye protection.

**Precautionary statement: Response**

P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor.

### 2.3. Other hazards

**Following substances are present in a concentration ≥ the concentration limit for depiction in Section 3 and fulfill the criteria for PBT/vPvB, or were identified as endocrine disruptor (ED):**

This mixture does not contain any substances in a concentration ≥ the concentration limit for depiction in Section 3 that are assessed to be a PBT, vPvB or ED.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

**Declaration of the ingredients according to CLP (EC) No 1272/2008:**

| Hazardous components<br>CAS-No.<br>EC Number<br>REACH-Reg No. | Concentration | Classification | Specific Conc. Limits, M-factors and ATEs | Add. Information |
|---|---|---|---|---|
| Oxirane, methyl-, polymer with oxirane, ether with 1,2,3-propanetriol (3:1), polymer with 1,1'-methylenebis[4-isocyanatobenzene]<br>59675-67-1 | 10- < 20 % | Acute Tox. 4, Inhalation, 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>STOT RE 2, H373 | oral:ATE = > 5.000 mg/kg<br>inhalation:ATE = 1,5 mg/l;dust/mist | |
| Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics<br>-----<br>918-167-1<br>01-2119472146-39 | 5- < 10 % | Asp. Tox. 1, H304<br>Flam. Liq. 3, H226 | dermal:ATE = 2.201 mg/kg | |
| Reaction mass of ethylbenzene and m-xylene and p-xylene<br><br>01-2119555267-33 | 1- < 5 % | Aquatic Chronic 3, H412<br>Flam. Liq. 3, H226<br>Asp. Tox. 1, H304<br>Acute Tox. 4, Dermal, H312<br>Acute Tox. 4, Inhalation, H332<br>Eye Irrit. 2, H319<br>Skin Irrit. 2, H315<br>STOT SE 3, H335<br>STOT RE 2, H373 | dermal:ATE = 1.100 mg/kg<br>oral:ATE = 3.523 mg/kg<br>inhalation:ATE = 17,4 mg/l;vapour | |
| Titanium dioxide < 1% particles with diameter ≤ 10 µm<br>13463-67-7<br>236-675-5<br>01-2119489379-17 | 1- < 5 % | | | |
| 4,4'- methylenediphenyl diisocyanate<br>101-68-8<br>202-966-0<br>01-2119457014-47 | 0,1- < 1 % | Carc. 2, H351<br>Acute Tox. 4, Inhalation, H332<br>STOT RE 2, H373<br>Eye Irrit. 2, H319<br>STOT SE 3, H335<br>Skin Irrit. 2, H315<br>Resp. Sens. 1, H334<br>Skin Sens. 1, H317 | Eye Irrit. 2; H319; C >= 5 %<br>Skin Irrit. 2; H315; C >= 5 %<br>Resp. Sens. 1; H334; C >= 0,1 %<br>STOT SE 3; H335; C >= 5 %<br>=====<br>inhalation:ATE = 1,5 mg/l;dust/mist | |
| Hexane, 1,6-diisocyanato-, homopolymer, V=7000-11000 mPas/23<br>28182-81-2<br>01-2119970543-34 | 0,1- < 1 % | Skin Sens. 1, H317<br>STOT SE 3, H335<br>Acute Tox. 4, Inhalation, H332 | inhalation:ATE = 1,5 mg/l;dust/mist | |
| 4-isocyanatosulphonyltoluene<br>4083-64-1<br>223-810-8<br>01-2119980050-47 | 0,1- < 1 % | Eye Irrit. 2, H319<br>STOT SE 3, H335<br>Skin Irrit. 2, H315<br>Resp. Sens. 1, H334 | Eye Irrit. 2; H319; C >= 5 %<br>STOT SE 3; H335; C >= 5 %<br>Skin Irrit. 2; H315; C >= 5 % | |
| dibutyltin dilaurate<br>77-58-7<br>201-039-8<br>01-2119496068-27 | 0,1- < 0,2 % | Acute Tox. 4, Oral, H302<br>Aquatic Chronic 1, H410<br>Aquatic Acute 1, H400<br>STOT RE 1, H372<br>STOT SE 1, H370<br>Repr. 1B, H360FD<br>Muta. 2, H341<br>Skin Sens. 1, H317<br>Eye Irrit. 2, H319 | M acute = 1<br>M chronic = 1<br>=====<br>oral:ATE = 500 mg/kg | |

**If no ATE values are displayed, please refer to LD/LC50 values in Section 11.**
**For full text of the H - statements and other abbreviations see section 16 "Other information".**

## SECTION 4: First aid measures

**4.1. Description of first aid measures**

Inhalation:
Fresh air, oxygen supply, warmth; seek specialist medical attention.
Delayed effects possible after inhalation.

Skin contact:
IF ON SKIN: Wash with plenty of soap and water.
In case of adverse health effects seek medical advice.

Eye contact:
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Ingestion:
Rinse mouth, drink 1-2 glasses of water, do not induce vomiting, consult a doctor.

**4.2. Most important symptoms and effects, both acute and delayed**
SKIN: Rash, Urticaria.

RESPIRATORY: Irritation, coughing, shortness of breath, chest tightness.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

SKIN: Redness, inflammation.

EYE: Irritation, conjunctivitis.

**4.3. Indication of any immediate medical attention and special treatment needed**
See section: Description of first aid measures

## SECTION 5: Firefighting measures

**5.1. Extinguishing media**
**Suitable extinguishing media:**
All common extinguishing agents are suitable.

**Extinguishing media which must not be used for safety reasons:**
High pressure waterjet

**5.2. Special hazards arising from the substance or mixture**
In case of fire toxic gases can be released.

**5.3. Advice for firefighters**
Wear protective equipment.
Wear self-contained breathing apparatus.

## SECTION 6: Accidental release measures

**6.1. Personal precautions, protective equipment and emergency procedures**
Wear protective equipment.
Avoid contact with skin and eyes.
Keep unprotected persons away.

**6.2. Environmental precautions**
Do not empty into drains / surface water / ground water.

**6.3. Methods and material for containment and cleaning up**
Remove mechanically.
Dispose of contaminated material as waste according to Section 13.

**6.4. Reference to other sections**
See advice in section 8

## SECTION 7: Handling and storage

**7.1. Precautions for safe handling**
Hygiene measures:
Wash hands before work breaks and after finishing work.
Do not eat, drink or smoke while working.
Take off contaminated clothing and wash before reuse.

**7.2. Conditions for safe storage, including any incompatibilities**
Ensure good ventilation/extraction.
Store in a cool place.
Keep container tightly sealed.
Storage at 15 to 25°C is recommended.

**7.3. Specific end use(s)**
adhesive and sealant

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

**Occupational Exposure Limits**

Valid for
Germany

| Ingredient [Regulated substance] | ppm | mg/m³ | Value type | Short term exposure limit category / Remarks | Regulatory list |
|---|---|---|---|---|---|
| Polyvinyl chloride<br>9002-86-2 | | 1,25 | Exposure limit(s): | If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7). | TRGS 900 |
| Polyvinyl chloride<br>9002-86-2 | | 10 | Exposure limit(s): | 2<br>If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7). | TRGS 900 |
| Polyvinyl chloride<br>9002-86-2 | | | Short Term Exposure Classification: | Category II: substances with a resorptive effect. | TRGS 900 |
| Calcium carbonate<br>471-34-1 | | 1,25 | Exposure limit(s): | If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7). | TRGS 900 |
| Calcium carbonate<br>471-34-1 | | 10 | Exposure limit(s): | 2<br>If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7). | TRGS 900 |
| Calcium carbonate<br>471-34-1 | | | Short Term Exposure Classification: | Category II: substances with a resorptive effect. | TRGS 900 |
| Limestone<br>1317-65-3 | | 10 | Exposure limit(s): | 2<br>If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7). | TRGS 900 |
| Limestone<br>1317-65-3 | | 1,25 | Exposure limit(s): | If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7). | TRGS 900 |
| Limestone<br>1317-65-3 | | | Short Term Exposure Classification: | Category II: substances with a resorptive effect. | TRGS 900 |
| Titanium dioxide<br>13463-67-7 | | 1,25 | Exposure limit(s): | If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7). | TRGS 900 |
| Titanium dioxide<br>13463-67-7 | | 10 | Exposure limit(s): | 2<br>If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7). | TRGS 900 |
| Titanium dioxide<br>13463-67-7 | | | Short Term Exposure Classification: | Category II: substances with a resorptive effect. | TRGS 900 |
| Silicon dioxide<br>112945-52-5 | | 4 | Exposure limit(s): | If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7). | TRGS 900 |
| Silicon dioxide<br>112945-52-5 | | 1,25 | Exposure limit(s): | If the AGW and BGW values are complied with, there should be no risk of | TRGS 900 |

| | | | | | |
|---|---|---|---|---|---|
| | | | | reproductive damage (see Number 2.7). | |
| Silicon dioxide<br>112945-52-5 | | 10 | Exposure limit(s): | 2<br>If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7). | TRGS 900 |
| Silicon dioxide<br>112945-52-5 | | | Short Term Exposure Classification: | Category II: substances with a resorptive effect. | TRGS 900 |
| 4,4'-Methylenediphenyl diisocyanate<br>101-68-8 | | | Skin designation: | Can be absorbed through the skin. | TRGS 900 |
| 4,4'-Methylenediphenyl diisocyanate<br>101-68-8 | | | STEL (Short Term Exposure Limit) factor: | 1<br>Substance listed with both Peak factor and STEL factor. The Peak factor is supplied with the AGW values. | TRGS 900 |
| 4,4'-Methylenediphenyl diisocyanate<br>101-68-8 | | 0,05 | Exposure limit(s): | 2<br>If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7). | TRGS 900 |
| 4,4'-Methylenediphenyl diisocyanate<br>101-68-8 | | | Short Term Exposure Classification: | Category I: substances for which the localized effect has an assigned OEL or for substances with a sensitizing effect in respiratory passages. | TRGS 900 |

**Predicted No-Effect Concentration (PNEC):**

| Name on list | Environmental Compartment | Exposure period | Value | | | | Remarks |
|---|---|---|---|---|---|---|---|
| | | | mg/l | ppm | mg/kg | others | |
| Reaction mass of ethylbenzene and m-xylene and p-xylene | aqua (freshwater) | | 0,044 mg/l | | | | |
| Reaction mass of ethylbenzene and m-xylene and p-xylene | Freshwater - intermittent | | 0,01 mg/l | | | | |
| Reaction mass of ethylbenzene and m-xylene and p-xylene | aqua (marine water) | | 0,004 mg/l | | | | |
| Reaction mass of ethylbenzene and m-xylene and p-xylene | Marine water - intermittent | | 0,001 mg/l | | | | |
| Reaction mass of ethylbenzene and m-xylene and p-xylene | sewage treatment plant (STP) | | 1,6 mg/l | | | | |
| Reaction mass of ethylbenzene and m-xylene and p-xylene | sediment (freshwater) | | | | 2,52 mg/kg | | |
| Reaction mass of ethylbenzene and m-xylene and p-xylene | sediment (marine water) | | | | 0,252 mg/kg | | |
| Reaction mass of ethylbenzene and m-xylene and p-xylene | Soil | | | | 0,852 mg/kg | | |
| Reaction mass of ethylbenzene and m-xylene and p-xylene | Predator | | | | | | no potential for bioaccumulation |
| 4,4'- methylenediphenyl diisocyanate 101-68-8 | aqua (freshwater) | | 0,0037 mg/l | | | | |
| 4,4'- methylenediphenyl diisocyanate 101-68-8 | aqua (intermittent releases) | | 0,037 mg/l | | | | |
| 4,4'- methylenediphenyl diisocyanate 101-68-8 | aqua (marine water) | | 0,00037 mg/l | | | | |
| 4,4'- methylenediphenyl diisocyanate 101-68-8 | sediment (freshwater) | | | | 11,7 mg/kg | | |
| 4,4'- methylenediphenyl diisocyanate 101-68-8 | sediment (freshwater) | | | | 1,17 mg/kg | | |
| 4,4'- methylenediphenyl diisocyanate 101-68-8 | Soil | | | | 2,33 mg/kg | | |
| 4,4'- methylenediphenyl diisocyanate 101-68-8 | Predator | | | | | | no potential for bioaccumulation |
| Hexane, 1,6-diisocyanato-, homopolymer 28182-81-2 | sewage treatment plant (STP) | | 6,46 mg/l | | | | |
| p-Toluenesulphonyl isocyanate 4083-64-1 | aqua (freshwater) | | 0,03 mg/l | | | | |
| p-Toluenesulphonyl isocyanate 4083-64-1 | aqua (marine water) | | 0,003 mg/l | | | | |
| p-Toluenesulphonyl isocyanate 4083-64-1 | sewage treatment plant (STP) | | 0,4 mg/l | | | | |
| p-Toluenesulphonyl isocyanate 4083-64-1 | sediment (freshwater) | | | | 0,172 mg/kg | | |
| p-Toluenesulphonyl isocyanate 4083-64-1 | sediment (marine water) | | | | 0,017 mg/kg | | |
| p-Toluenesulphonyl isocyanate 4083-64-1 | Soil | | | | 0,017 mg/kg | | |
| dibutyltin dilaurate 77-58-7 | aqua (freshwater) | | 0,000463 mg/l | | | | |
| dibutyltin dilaurate 77-58-7 | aqua (marine water) | | 0,000046 mg/l | | | | |
| dibutyltin dilaurate 77-58-7 | aqua (intermittent releases) | | 0,005 mg/l | | | | |
| dibutyltin dilaurate 77-58-7 | sewage treatment plant | | 100 mg/l | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | (STP) | | | | | | |
| dibutyltin dilaurate<br>77-58-7 | sediment (freshwater) | | | | 0,05 mg/kg | | |
| dibutyltin dilaurate<br>77-58-7 | sediment (marine water) | | | | 0,005 mg/kg | | |
| dibutyltin dilaurate<br>77-58-7 | Soil | | | | 0,0407 mg/kg | | |
| dibutyltin dilaurate<br>77-58-7 | oral | | | | 0,2 mg/kg | | |

**Derived No-Effect Level (DNEL):**

| Name on list | Application Area | Route of Exposure | Health Effect | Exposure Time | Value | Remarks |
|---|---|---|---|---|---|---|
| Reaction mass of ethylbenzene and m-xylene and p-xylene | Workers | inhalation | Long term exposure - systemic effects | | 221 mg/m3 | no potential for bioaccumulation |
| Reaction mass of ethylbenzene and m-xylene and p-xylene | Workers | inhalation | Long term exposure - local effects | | 221 mg/m3 | no potential for bioaccumulation |
| Reaction mass of ethylbenzene and m-xylene and p-xylene | Workers | dermal | Long term exposure - systemic effects | | 212 mg/kg | no potential for bioaccumulation |
| Reaction mass of ethylbenzene and m-xylene and p-xylene | General population | inhalation | Long term exposure - systemic effects | | 65,3 mg/m3 | no potential for bioaccumulation |
| Reaction mass of ethylbenzene and m-xylene and p-xylene | General population | dermal | Long term exposure - systemic effects | | 125 mg/kg | no potential for bioaccumulation |
| Reaction mass of ethylbenzene and m-xylene and p-xylene | General population | oral | Long term exposure - systemic effects | | 12,5 mg/kg | no potential for bioaccumulation |
| Reaction mass of ethylbenzene and m-xylene and p-xylene | Workers | inhalation | Acute/short term exposure - systemic effects | | 442 mg/m3 | no potential for bioaccumulation |
| Reaction mass of ethylbenzene and m-xylene and p-xylene | Workers | inhalation | Acute/short term exposure - local effects | | 442 mg/m3 | no potential for bioaccumulation |
| Reaction mass of ethylbenzene and m-xylene and p-xylene | General population | inhalation | Acute/short term exposure - systemic effects | | 260 mg/m3 | no potential for bioaccumulation |
| Reaction mass of ethylbenzene and m-xylene and p-xylene | General population | inhalation | Long term exposure - local effects | | 65,3 mg/m3 | no potential for bioaccumulation |
| Reaction mass of ethylbenzene and m-xylene and p-xylene | General population | inhalation | Acute/short term exposure - local effects | | 260 mg/m3 | no potential for bioaccumulation |
| 4,4'- methylenediphenyl diisocyanate 101-68-8 | Workers | inhalation | Long term exposure - local effects | | 0,05 mg/m3 | no potential for bioaccumulation |
| 4,4'- methylenediphenyl diisocyanate 101-68-8 | Workers | inhalation | Acute/short term exposure - local effects | | 0,1 mg/m3 | no potential for bioaccumulation |
| 4,4'- methylenediphenyl diisocyanate 101-68-8 | General population | inhalation | Long term exposure - local effects | | 0,025 mg/m3 | no potential for bioaccumulation |
| 4,4'- methylenediphenyl diisocyanate 101-68-8 | General population | inhalation | Acute/short term exposure - local effects | | 0,05 mg/m3 | no potential for bioaccumulation |
| Hexane, 1,6-diisocyanato-, homopolymer 28182-81-2 | Workers | inhalation | Acute/short term exposure - local effects | | 1 mg/m3 | |
| Hexane, 1,6-diisocyanato-, homopolymer 28182-81-2 | Workers | inhalation | Long term exposure - local effects | | 0,5 mg/m3 | |
| p-Toluenesulphonyl isocyanate 4083-64-1 | Workers | inhalation | Long term exposure - systemic effects | | 3,24 mg/m3 | |
| p-Toluenesulphonyl isocyanate 4083-64-1 | Workers | dermal | Long term exposure - systemic effects | | 0,92 mg/kg | |
| p-Toluenesulphonyl isocyanate 4083-64-1 | General population | inhalation | Long term exposure - systemic effects | | 0,8 mg/m3 | |
| p-Toluenesulphonyl isocyanate 4083-64-1 | General population | dermal | Long term exposure - systemic effects | | 0,46 mg/kg | |
| p-Toluenesulphonyl isocyanate 4083-64-1 | General population | oral | Long term exposure - systemic effects | | 0,46 mg/kg | |
| dibutyltin dilaurate 77-58-7 | Workers | dermal | Acute/short term exposure - | | 2,08 mg/kg | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | systemic effects | | | |
| dibutyltin dilaurate 77-58-7 | Workers | Dermal | Long term exposure - systemic effects | | 0,43 mg/kg | |
| dibutyltin dilaurate 77-58-7 | Workers | inhalation | Long term exposure - systemic effects | | 0,02 mg/m3 | |
| dibutyltin dilaurate 77-58-7 | General population | dermal | Acute/short term exposure - systemic effects | | 0,5 mg/kg | |
| dibutyltin dilaurate 77-58-7 | General population | inhalation | Acute/short term exposure - systemic effects | | 0,04 mg/m3 | |
| dibutyltin dilaurate 77-58-7 | General population | oral | Acute/short term exposure - systemic effects | | 0,02 mg/kg | |
| dibutyltin dilaurate 77-58-7 | General population | dermal | Long term exposure - systemic effects | | 0,16 mg/kg | |
| dibutyltin dilaurate 77-58-7 | General population | inhalation | Long term exposure - systemic effects | | 0,005 mg/m3 | |
| dibutyltin dilaurate 77-58-7 | General population | oral | Long term exposure - systemic effects | | 0,003 mg/kg | |
| dibutyltin dilaurate 77-58-7 | Workers | inhalation | Acute/short term exposure - systemic effects | | 0,059 mg/m3 | |

**Biological Exposure Indices:**

| Ingredient [Regulated substance] | Parameters | Biological specimen | Sampling time | Conc. | Basis of biol. exposure index | Remark | Additional Information |
|---|---|---|---|---|---|---|---|
| 4,4'-Methylenediphenyl diisocyanate<br>101-68-8 | 4,4-Diaminodiphenylmethane | Creatinine in urine | Sampling time: End of shift. | 10 µg/g | DE BAT | BAT values reflect the total physical load of workplace substances absorbed through inhalation, dermally, etc. With occupational exposure to MDI, parameter 4,4'-Diaminodiphenylmethane (MDA) in the urine covers all components of a complex MDI mixture, since both monomers and oligomers of the MDI are degraded independent of the exposure path of the monomerous MDI. In contrast, the MAK value for MDI takes into account only the monomer MDI portion. | |

**8.2. Exposure controls:**

Engineering controls:
Use only in well ventilated areas.

Respiratory protection:
The product should only be used at workplaces with intensive ventilation/extraction.
If intensive ventilation/extraction is not possible respiratory protection equipment with ABEK P2 filter (EN 14387) should be worn.

Hand protection:
Chemical-resistant protective gloves (EN 374).
Suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to > 30 minutes permeation time as per EN 374):
nitrile rubber (NBR; >= 0.4 mm thickness)
Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374):
nitrile rubber (NBR; >= 0.4 mm thickness)
This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced.

Eye protection:
Goggles which can be tightly sealed.
Protective eye equipment should conform to EN166.

Skin protection:
Wear protective equipment.
Protective clothing that covers arms and legs.
Protective clothing should conform to EN 14605 for liquid splashes or to EN 13982 for dusts.

Advices to personal protection equipment:
Use only personal protection that's CE-labelled according to Directive 89/686/EEC (Europe) or to Regulation No. 819 of 19 August 1994 (Norway), or equivalent.
The information provided on personal protective equipment is for guidance purposes only. A full risk assessment should be conducted prior to using this product to determine the appropriate personal protective equipment to suit local conditions.
Personal protective equipment should conform to the relevant EN standard.

## SECTION 9: Physical and chemical properties

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

| | |
|---|---|
| Delivery form | paste |
| Colour | white |
| Odor | Faintly, specific |
| Physical state | solid |
| Melting point | Not applicable, Determination technically not possible |
| Solidification temperature | Not applicable, Product is a solid. |
| Initial boiling point | Not applicable, Decomposes > 140°C (284°F). |
| Flammability | The product is not flammable. |
| Explosive limits | Not applicable, Product is a solid. |
| Flash point | Not applicable, Product is a solid. |
| Auto-ignition temperature | Not applicable, Product is a solid. |
| Decomposition temperature | Not applicable, Substance/mixture is not self-reactive, no organic peroxide and does not decompose under foreseen conditions of use |
| pH | Not applicable, Product reacts with water. |
| Viscosity (kinematic) | Not applicable, Product is a solid. |
| Solubility (qualitative)<br>(23 °C (73.4 °F); Solvent: Water) | Insoluble |
| Partition coefficient: n-octanol/water | Not applicable<br>Mixture |
| Vapour pressure<br>(20 °C (68 °F)) | < 0,1 hPa |
| Density<br>(20 °C (68 °F)) | 1,17 - 1,23 g/cm3 Dummy |
| Relative vapour density: | Not applicable, Product is a solid. |
| Particle characteristics | Not applicable, mixture is a paste. |

**9.2. Other information**

**9.2.1. Information with regard to physical hazard classes**

Flammable Solids

| | |
|---|---|
| Burning rate | 0,26 mm/s |

| | |
|---|---|
| Burning time | 580 s; no method / method unknown |

## SECTION 10: Stability and reactivity

**10.1. Reactivity**
Reaction with water, alcohols, amines.
Reacts with water: Pressure built up in closed vessel (CO2).

**10.2. Chemical stability**
Stable under recommended storage conditions.

**10.3. Possibility of hazardous reactions**
See section reactivity

**10.4. Conditions to avoid**
Humidity

**10.5. Incompatible materials**
See section reactivity.

**10.6. Hazardous decomposition products**
At higher temperatures isocyanate may be released.
Carbon dioxide is generated under contact with moisture, leading to pressure in the cans. Danger of cans bursting!

## SECTION 11: Toxicological information

**General toxicological information:**
An allergic reaction cannot be excluded after repeated skin contact.

**11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**

**Acute oral toxicity:**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances<br>CAS-No. | Value type | Value | Species | Method |
|---|---|---|---|---|
| Oxirane, methyl-, polymer with oxirane, ether with 1,2,3-propanetriol (3:1), polymer with 1,1'-methylenebis[4-isocyanatobenzene]<br>59675-67-1 | Acute toxicity estimate (ATE) | > 5.000 mg/kg | | Expert judgement |
| Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics<br>----- | LD50 | > 5.000 mg/kg | rat | OECD Guideline 401 (Acute Oral Toxicity) |
| Reaction mass of ethylbenzene and m-xylene and p-xylene | LD50 | 3.523 mg/kg | rat | EU Method B.1 (Acute Toxicity (Oral)) |
| Reaction mass of ethylbenzene and m-xylene and p-xylene | Acute toxicity estimate (ATE) | 3.523 mg/kg | | Expert judgement |
| Titanium dioxide < 1% particles with diameter ≤ 10 µm<br>13463-67-7 | LD50 | > 5.000 mg/kg | rat | OECD Guideline 425 (Acute Oral Toxicity: Up-and-Down Procedure) |
| 4,4'- methylenediphenyl diisocyanate<br>101-68-8 | LD50 | > 2.000 mg/kg | rat | other guideline: |
| Hexane, 1,6-diisocyanato-, homopolymer, V=7000-11000 mPas/23<br>28182-81-2 | LD50 | > 5.000 mg/kg | rat | OECD Guideline 401 (Acute Oral Toxicity) |
| 4-isocyanatosulphonyltoluene<br>4083-64-1 | LD50 | 2.330 mg/kg | rat | equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity) |
| dibutyltin dilaurate<br>77-58-7 | Acute toxicity estimate (ATE) | 500 mg/kg | | Expert judgement |
| dibutyltin dilaurate<br>77-58-7 | LD50 | 500 - 2.000 mg/kg | rat | not specified |

**Acute dermal toxicity:**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances<br>CAS-No. | Value type | Value | Species | Method |
|---|---|---|---|---|
| Oxirane, methyl-, polymer with oxirane, ether with 1,2,3-propanetriol (3:1), polymer with 1,1'-methylenebis[4-isocyanatobenzene]<br>59675-67-1 | LD50 | > 9.400 mg/kg | rabbit | OECD Guideline 402 (Acute Dermal Toxicity) |
| Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics<br>----- | LD50 | > 2.200 - 2.500 mg/kg | rabbit | not specified |
| Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics<br>----- | Acute toxicity estimate (ATE) | 2.201 mg/kg | | Expert judgement |
| Reaction mass of ethylbenzene and m-xylene and p-xylene | Acute toxicity estimate (ATE) | 1.100 mg/kg | | Expert judgement |
| Titanium dioxide < 1% particles with diameter ≤ 10 µm<br>13463-67-7 | LD50 | >= 10.000 mg/kg | hamster | not specified |
| 4,4'- methylenediphenyl diisocyanate<br>101-68-8 | LD50 | > 9.400 mg/kg | rabbit | OECD Guideline 402 (Acute Dermal Toxicity) |
| Hexane, 1,6-diisocyanato-, homopolymer, V=7000-11000 mPas/23<br>28182-81-2 | LD50 | > 15.800 mg/kg | rabbit | OECD Guideline 402 (Acute Dermal Toxicity) |
| 4-isocyanatosulphonyltoluene<br>4083-64-1 | LD50 | > 2.000 mg/kg | rat | OECD Guideline 402 (Acute Dermal Toxicity) |
| dibutyltin dilaurate<br>77-58-7 | LD50 | > 2.000 mg/kg | rat | OECD Guideline 402 (Acute Dermal Toxicity) |

**Acute inhalative toxicity:**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances CAS-No. | Value type | Value | Test atmosphere | Exposure time | Species | Method |
|---|---|---|---|---|---|---|
| Oxirane, methyl-, polymer with oxirane, ether with 1,2,3-propanetriol (3:1), polymer with 1,1'-methylenebis[4-isocyanatobenzene] 59675-67-1 | Acute toxicity estimate (ATE) | 1,5 mg/l | dust/mist | 4 h | | Expert judgement |
| Reaction mass of ethylbenzene and m-xylene and p-xylene | Acute toxicity estimate (ATE) | 17,4 mg/l | vapour | | | Expert judgement |
| Titanium dioxide < 1% particles with diameter ≤ 10 µm 13463-67-7 | LC50 | > 6,82 mg/l | dust | 4 h | rat | not specified |
| 4,4'- methylenediphenyl diisocyanate 101-68-8 | Acute toxicity estimate (ATE) | 1,5 mg/l | dust/mist | 4 h | | Expert judgement |
| Hexane, 1,6-diisocyanato-, homopolymer, V=7000-11000 mPas/23 28182-81-2 | Acute toxicity estimate (ATE) | 1,5 mg/l | dust/mist | | | Expert judgement |

**Skin corrosion/irritation:**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances CAS-No. | Result | Exposure time | Species | Method |
|---|---|---|---|---|
| Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics ----- | mildly irritating | | rabbit | equivalent or similar to OECD Guideline 404 (Acute Dermal Irritation / Corrosion) |
| Reaction mass of ethylbenzene and m-xylene and p-xylene | moderately irritating | | rabbit | not specified |
| Titanium dioxide < 1% particles with diameter ≤ 10 µm 13463-67-7 | not irritating | 4 h | rabbit | equivalent or similar to OECD Guideline 404 (Acute Dermal Irritation / Corrosion) |
| 4,4'- methylenediphenyl diisocyanate 101-68-8 | irritating | 4 h | rabbit | OECD Guideline 404 (Acute Dermal Irritation / Corrosion) |
| Hexane, 1,6-diisocyanato-, homopolymer, V=7000-11000 mPas/23 28182-81-2 | slightly irritating | 4 h | rabbit | OECD Guideline 404 (Acute Dermal Irritation / Corrosion) |
| dibutyltin dilaurate 77-58-7 | not corrosive | | Human, EpiSkinTM (SM), Reconstructed Human Epidermis (RHE) | OECD Guideline 431 (In Vitro Skin Corrosion: Reconstructed Human Epidermis (RHE) Test Method) |
| dibutyltin dilaurate 77-58-7 | not irritating | | Human, EpiSkinTM (SM), Reconstructed Human Epidermis (RHE) | other guideline: |
| dibutyltin dilaurate 77-58-7 | not corrosive | | Corrositex Biobarrier Membrane (reconstituted | OECD Guideline 435 (In Vitro Membrane Barrier Test Method for Skin Corrosion) |

| | | | | |
|---|---|---|---|---|
| | | | collagen matrix) | |

**Serious eye damage/irritation:**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| **Hazardous substances CAS-No.** | **Result** | **Exposure time** | **Species** | **Method** |
|---|---|---|---|---|
| Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics<br>----- | not irritating | | rabbit | OECD Guideline 405 (Acute Eye Irritation / Corrosion) |
| Reaction mass of ethylbenzene and m-xylene and p-xylene | moderately irritating | | rabbit | not specified |
| Titanium dioxide < 1% particles with diameter ≤ 10 µm<br>13463-67-7 | not irritating | | rabbit | OECD Guideline 405 (Acute Eye Irritation / Corrosion) |
| 4,4'- methylenediphenyl diisocyanate<br>101-68-8 | irritating | | human | Weight of evidence |
| Hexane, 1,6-diisocyanato-, homopolymer, V=7000-11000 mPas/23<br>28182-81-2 | slightly irritating | | rabbit | OECD Guideline 405 (Acute Eye Irritation / Corrosion) |
| dibutyltin dilaurate<br>77-58-7 | irritating | | rabbit | OECD Guideline 405 (Acute Eye Irritation / Corrosion) |

**Respiratory or skin sensitization:**

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

| Hazardous substances<br>CAS-No. | Result | Test type | Species | Method |
|---|---|---|---|---|
| Oxirane, methyl-, polymer with oxirane, ether with 1,2,3-propanetriol (3:1), polymer with 1,1'-methylenebis[4-isocyanatobenzene]<br>59675-67-1 | sensitising | Mouse local lymphnode assay (LLNA) | mouse | OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay) |
| Oxirane, methyl-, polymer with oxirane, ether with 1,2,3-propanetriol (3:1), polymer with 1,1'-methylenebis[4-isocyanatobenzene]<br>59675-67-1 | sensitising | Respiratory sensitisation | guinea pig | not specified |
| Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics<br>----- | not sensitising | Guinea pig maximisation test | guinea pig | equivalent or similar to OECD Guideline 406 (Skin Sensitisation) |
| Reaction mass of ethylbenzene and m-xylene and p-xylene | not sensitising | Mouse local lymphnode assay (LLNA) | mouse | equivalent or similar to OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay) |
| Titanium dioxide < 1% particles with diameter ≤ 10 µm<br>13463-67-7 | not sensitising | Mouse local lymphnode assay (LLNA) | mouse | equivalent or similar to OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay) |
| 4,4'- methylenediphenyl diisocyanate<br>101-68-8 | sensitising | Buehler test | guinea pig | OECD Guideline 406 (Skin Sensitisation) |
| 4,4'- methylenediphenyl diisocyanate<br>101-68-8 | sensitising | Respiratory sensitisation | guinea pig | not specified |
| Hexane, 1,6-diisocyanato-, homopolymer, V=7000-11000 mPas/23<br>28182-81-2 | sensitising | Guinea pig maximisation test | guinea pig | OECD Guideline 406 (Skin Sensitisation) |
| dibutyltin dilaurate<br>77-58-7 | Sensitizing | Guinea pig maximisation test | guinea pig | OECD Guideline 406 (Skin Sensitisation) |

**Germ cell mutagenicity:**

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

| Hazardous substances CAS-No. | Result | Type of study / Route of administration | Metabolic activation / Exposure time | Species | Method |
|---|---|---|---|---|---|
| Oxirane, methyl-, polymer with oxirane, ether with 1,2,3-propanetriol (3:1), polymer with 1,1'-methylenebis[4-isocyanatobenzene] 59675-67-1 | negative | bacterial reverse mutation assay (e.g Ames test) | with and without | | OECD Guideline 471 (Bacterial Reverse Mutation Assay) |
| Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics ----- | negative | bacterial reverse mutation assay (e.g Ames test) | with and without | | OECD Guideline 471 (Bacterial Reverse Mutation Assay) |
| Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics ----- | negative | in vitro mammalian chromosome aberration test | with and without | | equivalent or similar to OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test) |
| Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics ----- | negative | mammalian cell gene mutation assay | with and without | | equivalent or similar to OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test) |
| Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics ----- | negative | sister chromatid exchange assay in mammalian cells | with and without | | equivalent or similar to OECD Guideline 479 (Genetic Toxicology: In Vitro Sister Chromatid Exchange Assay in Mammalian Cells) |
| Reaction mass of ethylbenzene and m-xylene and p-xylene | negative | bacterial reverse mutation assay (e.g Ames test) | with and without | | equivalent or similar to OECD Guideline 471 (Bacterial Reverse Mutation Assay) |
| Reaction mass of ethylbenzene and m-xylene and p-xylene | negative | in vitro mammalian chromosome aberration test | with and without | | EU Method B.10 (Mutagenicity) |
| Reaction mass of ethylbenzene and m-xylene and p-xylene | negative | sister chromatid exchange assay in mammalian cells | with and without | | EU Method B.19 (Sister Chromatid Exchange Assay In Vitro) |
| Titanium dioxide < 1% particles with diameter ≤ 10 µm 13463-67-7 | negative | bacterial reverse mutation assay (e.g Ames test) | with and without | | OECD Guideline 471 (Bacterial Reverse Mutation Assay) |
| Titanium dioxide < 1% particles with diameter ≤ 10 µm 13463-67-7 | negative | in vitro mammalian chromosome aberration test | with and without | | OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test) |
| Titanium dioxide < 1% particles with diameter ≤ 10 µm 13463-67-7 | negative | mammalian cell gene mutation assay | with and without | | OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test) |
| 4,4'- methylenediphenyl diisocyanate 101-68-8 | negative | bacterial reverse mutation assay (e.g Ames test) | with and without | | EU Method B.13/14 (Mutagenicity) |
| Hexane, 1,6-diisocyanato-, homopolymer, V=7000-11000 mPas/23 28182-81-2 | negative | bacterial reverse mutation assay (e.g Ames test) | with and without | | OECD Guideline 471 (Bacterial Reverse Mutation Assay) |
| Hexane, 1,6-diisocyanato-, homopolymer, V=7000-11000 mPas/23 28182-81-2 | negative | mammalian cell gene mutation assay | with and without | | OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test) |
| Hexane, 1,6-diisocyanato-, homopolymer, V=7000-11000 mPas/23 28182-81-2 | negative | in vitro mammalian chromosome aberration test | with and without | | OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test) |
| 4-isocyanatosulphonyltoluene 4083-64-1 | negative | bacterial reverse mutation assay (e.g Ames test) | with and without | | not specified |
| 4- | negative | in vitro mammalian | with and without | | not specified |

| | | | | | |
|---|---|---|---|---|---|
| isocyanatosulphonyltoluene<br>4083-64-1 | | chromosome aberration test | | | |
| dibutyltin dilaurate<br>77-58-7 | negative | mammalian cell gene mutation assay | with and without | | OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test) |
| dibutyltin dilaurate<br>77-58-7 | positive | in vitro mammalian chromosome aberration test | with and without | | OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test) |
| dibutyltin dilaurate<br>77-58-7 | negative | bacterial reverse mutation assay (e.g Ames test) | with and without | | OECD Guideline 471 (Bacterial Reverse Mutation Assay) |
| Oxirane, methyl-, polymer with oxirane, ether with 1,2,3-propanetriol (3:1), polymer with 1,1'-methylenebis[4-isocyanatobenzene]<br>59675-67-1 | negative | inhalation | | rat | OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test) |
| Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics<br>----- | negative | | | mouse | equivalent or similar to OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test) |
| Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics<br>----- | negative | | | rat | equivalent or similar to OECD Guideline 478 (Genetic Toxicology: Rodent Dominant Lethal Test) |
| Reaction mass of ethylbenzene and m-xylene and p-xylene | negative | intraperitoneal | | rat | equivalent or similar to OECD Guideline 478 (Genetic Toxicology: Rodent Dominant Lethal Test) |
| Titanium dioxide < 1% particles with diameter ≤ 10 µm<br>13463-67-7 | negative | oral: gavage | | mouse | OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test) |
| 4,4'- methylenediphenyl diisocyanate<br>101-68-8 | negative | inhalation | | rat | OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test) |
| dibutyltin dilaurate<br>77-58-7 | positive | oral: gavage | | mouse | OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test) |

**Carcinogenicity**

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

| **Hazardous components CAS-No.** | **Result** | **Route of application** | **Exposure time / Frequency of treatment** | **Species** | **Sex** | **Method** |
|---|---|---|---|---|---|---|
| Reaction mass of ethylbenzene and m-xylene and p-xylene | not carcinogenic | oral: gavage | 103 w<br>5 d/w | rat | male/female | EU Method B.32 (Carcinogenicity Test) |
| Titanium dioxide < 1% particles with diameter ≤ 10 µm<br>13463-67-7 | not carcinogenic | inhalation | 24 m<br>6 h/d; 5 d/w | rat | male/female | OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies) |
| 4,4'- methylenediphenyl diisocyanate<br>101-68-8 | carcinogenic | inhalation: aerosol | 2 y<br>6 h/d | rat | male/female | OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies) |

**Reproductive toxicity:**

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

| Hazardous substances<br>CAS-No. | Result / Value | Test type | Route of application | Species | Method |
|---|---|---|---|---|---|
| Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics<br>----- | NOAEL P >= 1.720 mg/kg<br><br>NOAEL F1 >= 1.720 mg/kg | screening | inhalation | rat | OECD Guideline 421 (Reproduction / Developmental Toxicity Screening Test) |
| Titanium dioxide < 1% particles with diameter ≤ 10 µm<br>13463-67-7 | NOAEL P > 1.000 mg/kg<br><br>NOAEL F1 > 1.000 mg/kg | | oral: gavage | rat | OECD Guideline 421 (Reproduction / Developmental Toxicity Screening Test) |
| 4-isocyanatosulphonyltoluene<br>4083-64-1 | NOAEL F1 300 mg/kg | one-generation study | oral: gavage | rat | OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test) |

**STOT-single exposure:**

No data available.

**STOT-repeated exposure:**

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

| Hazardous substances<br>CAS-No. | Result / Value | Route of application | Exposure time / Frequency of treatment | Species | Method |
|---|---|---|---|---|---|
| Oxirane, methyl-, polymer with oxirane, ether with 1,2,3-propanetriol (3:1), polymer with 1,1'-methylenebis[4-isocyanatobenzene]<br>59675-67-1 | NOAEL 0,0002 mg/l | inhalation: aerosol | 2 years<br>6 h/d; 5 d/w | rat | OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies) |
| Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics<br>----- | NOAEL 5.000 mg/kg | oral: gavage | 13 weeks<br>daily | rat | equivalent or similar to OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents) |
| Reaction mass of ethylbenzene and m-xylene and p-xylene | NOAEL 250 mg/kg | oral: gavage | 103 w<br>5 d/w | rat | other guideline: |
| Titanium dioxide < 1% particles with diameter ≤ 10 µm<br>13463-67-7 | NOAEL 1.000 mg/kg | oral: gavage | 90 d<br>daily | rat | OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents) |
| 4,4'- methylenediphenyl diisocyanate<br>101-68-8 | NOAEL 0,0002 mg/l | inhalation: aerosol | main: 2 y; satellite:1 y<br>6 h/d; 5 d/w | rat | OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies) |

**Aspiration hazard:**

The mixture is classified based on Viscosity data.

| Hazardous substances<br>CAS-No. | Viscosity (kinematic)<br>Value | Temperature | Method | Remarks |
|---|---|---|---|---|
| Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics<br>----- | 0,34 mm2/s | 40 °C | not specified | |

**11.2 Information on other hazards**

not applicable

## SECTION 12: Ecological information

**General ecological information:**
Do not empty into drains, soil or bodies of water.

**12.1. Toxicity**

**Toxicity (Fish):**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

The table below presents the data of the classified substances present in the mixture.

| Hazardous substances<br>CAS-No. | Value type | Value | Exposure time | Species | Method |
|---|---|---|---|---|---|
| Oxirane, methyl-, polymer with oxirane, ether with 1,2,3-propanetriol (3:1), polymer with 1,1'-methylenebis[4-isocyanatobenzene]<br>59675-67-1 | LC50 | > 1.000 mg/l | 96 h | not specified | not specified |
| Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics<br>----- | LL50 | > 1.000 mg/l | 96 h | Oncorhynchus mykiss | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| Reaction mass of ethylbenzene and m-xylene and p-xylene | LC50 | 2,6 mg/l | 96 h | Oncorhynchus mykiss | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| Reaction mass of ethylbenzene and m-xylene and p-xylene | NOEC | > 1,3 mg/l | 56 d | Oncorhynchus mykiss | other guideline: |
| Titanium dioxide < 1% particles with diameter ≤ 10 µm<br>13463-67-7 | LC50 | Toxicity > Water solubility | 48 h | Danio rerio | other guideline: |
| Titanium dioxide < 1% particles with diameter ≤ 10 µm<br>13463-67-7 | NOEC | Toxicity > Water solubility | 8 d | Danio rerio | OECD Guideline 212 (Fish, Short-term Toxicity Test on Embryo and Sac-Fry Stages) |
| 4,4'- methylenediphenyl diisocyanate<br>101-68-8 | LL50 | > 100 mg/l | 96 h | Danio rerio | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| Hexane, 1,6-diisocyanato-, homopolymer, V=7000-11000 mPas/23<br>28182-81-2 | LC50 | > 100 mg/l | 96 h | Brachydanio rerio (new name: Danio rerio) | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| 4-isocyanatosulphonyltoluene<br>4083-64-1 | LC50 | > 45 mg/l | 96 h | Oncorhynchus mykiss | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| dibutyltin dilaurate<br>77-58-7 | LC50 | 3,1 mg/l | 96 h | Danio rerio | OECD Guideline 203 (Fish, Acute Toxicity Test) |

**Toxicity (aquatic invertebrates):**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

The table below presents the data of the classified substances present in the mixture.

| Hazardous substances<br>CAS-No. | Value type | Value | Exposure time | Species | Method |
|---|---|---|---|---|---|
| Oxirane, methyl-, polymer with oxirane, ether with 1,2,3-propanetriol (3:1), polymer with 1,1'-methylenebis[4-isocyanatobenzene]<br>59675-67-1 | EC50 | > 1.000 mg/l | 48 h | not specified | not specified |
| Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics<br>----- | EL50 | > 1.000 mg/l | 48 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| Reaction mass of ethylbenzene and m-xylene and p-xylene | | > 1 mg/l | 24 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| Titanium dioxide < 1% | EC50 | Toxicity > Water | 48 h | Daphnia magna | OECD Guideline 202 |

| | | | | | |
|---|---|---|---|---|---|
| particles with diameter ≤ 10 µm<br>13463-67-7 | | solubility | | | (Daphnia sp. Acute Immobilisation Test) |
| 4,4'- methylenediphenyl diisocyanate<br>101-68-8 | EC50 | > 100 mg/l | 48 h | Daphnia magna | EU Method C.2 (Acute Toxicity for Daphnia) |
| Hexane, 1,6-diisocyanato-, homopolymer, V=7000-11000 mPas/23<br>28182-81-2 | EC50 | > 100 mg/l | 48 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| 4-isocyanatosulphonyltoluene<br>4083-64-1 | EC50 | > 100 mg/l | 48 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| dibutyltin dilaurate<br>77-58-7 | EC50 | 0,463 mg/l | 48 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |

**Chronic toxicity (aquatic invertebrates):**

The table below presents the data of the classified substances present in the mixture.

| **Hazardous substances**<br>**CAS-No.** | **Value type** | **Value** | **Exposure time** | **Species** | **Method** |
|---|---|---|---|---|---|
| Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics<br>----- | NOELR | > 1 mg/l | 21 d | Daphnia magna | OECD 211 (Daphnia magna, Reproduction Test) |
| Reaction mass of ethylbenzene and m-xylene and p-xylene | NOEC | 1,17 mg/l | 7 d | Ceriodaphnia dubia | other guideline: |
| 4,4'- methylenediphenyl diisocyanate<br>101-68-8 | NOEC | 10 mg/l | 21 d | Daphnia magna | OECD 211 (Daphnia magna, Reproduction Test) |

**Toxicity (Algae):**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

The table below presents the data of the classified substances present in the mixture.

| Hazardous substances<br>CAS-No. | Value type | Value | Exposure time | Species | Method |
|---|---|---|---|---|---|
| Oxirane, methyl-, polymer with oxirane, ether with 1,2,3-propanetriol (3:1), polymer with 1,1'-methylenebis[4-isocyanatobenzene]<br>59675-67-1 | EC50 | > 1.640 mg/l | 72 h | not specified | not specified |
| Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics<br>----- | EL50 | > 1.000 mg/l | 72 h | Pseudokirchneriella subcapitata | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics<br>----- | NOELR | 1.000 mg/l | 72 h | Pseudokirchneriella subcapitata | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| Reaction mass of ethylbenzene and m-xylene and p-xylene | EC50 | 4,7 mg/l | 48 h | Pseudokirchneriella subcapitata | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| Reaction mass of ethylbenzene and m-xylene and p-xylene | NOEC | 0,44 mg/l | 73 h | Pseudokirchneriella subcapitata | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| Titanium dioxide < 1% particles with diameter ≤ 10 µm<br>13463-67-7 | EC50 | Toxicity > Water solubility | 72 h | Pseudokirchneriella subcapitata | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| Titanium dioxide < 1% particles with diameter ≤ 10 µm<br>13463-67-7 | NOEC | Toxicity > Water solubility | 72 h | Pseudokirchneriella subcapitata | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| 4,4'- methylenediphenyl diisocyanate<br>101-68-8 | EL50 | > 100 mg/l | 72 h | Desmodesmus subspicatus | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| 4,4'- methylenediphenyl diisocyanate<br>101-68-8 | NOELR | 100 mg/l | 72 h | Desmodesmus subspicatus | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| Hexane, 1,6-diisocyanato-, homopolymer, V=7000-11000 mPas/23<br>28182-81-2 | EC0 | > 100 mg/l | 72 h | Scenedesmus subspicatus (new name: Desmodesmus subspicatus) | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| 4-isocyanatosulphonyltoluene<br>4083-64-1 | EC50 | 30 mg/l | 72 h | Pseudokirchneriella subcapitata | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| 4-isocyanatosulphonyltoluene<br>4083-64-1 | EC10 | 23 mg/l | 72 h | Pseudokirchneriella subcapitata | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| dibutyltin dilaurate<br>77-58-7 | IC50 | > 3 mg/l | 72 h | Scenedesmus subspicatus (new name: Desmodesmus subspicatus) | OECD Guideline 201 (Alga, Growth Inhibition Test) |

**Toxicity (microorganisms):**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

The table below presents the data of the classified substances present in the mixture.

| Hazardous substances<br>CAS-No. | Value type | Value | Exposure time | Species | Method |
|---|---|---|---|---|---|
| Oxirane, methyl-, polymer with oxirane, ether with 1,2,3-propanetriol (3:1), polymer with 1,1'-methylenebis[4-isocyanatobenzene]<br>59675-67-1 | IC50 | > 100 mg/l | 3 h | activated sludge | OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) |
| Titanium dioxide < 1% particles with diameter ≤ 10 µm<br>13463-67-7 | EC50 | Toxicity > Water solubility | 3 h | activated sludge | ISO 8192 (Test for Inhibition of Oxygen Consumption by Activated Sludge) |
| 4,4'- methylenediphenyl diisocyanate<br>101-68-8 | EC50 | > 1.000 mg/l | 3 h | activated sludge of a predominantly domestic sewage | OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) |
| 4-isocyanatosulphonyltoluene<br>4083-64-1 | EC 50 | 2.511 mg/l | | | OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) |
| dibutyltin dilaurate | EC50 | > 1.000 mg/l | 3 h | activated sludge of a | OECD Guideline 209 |

| | | | | | |
|---|---|---|---|---|---|
| 77-58-7 | | | | predominantly domestic sewage | (Activated Sludge, Respiration Inhibition Test) |

**12.2. Persistence and degradability**

The table below presents the data of the classified substances present in the mixture.

| Hazardous substances<br>CAS-No. | Result | Test type | Degradability | Exposure time | Method |
|---|---|---|---|---|---|
| Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics<br>----- | not readily biodegradable. | aerobic | 31,3 % | 28 d | OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test) |
| Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics<br>----- | inherently biodegradable | aerobic | 72 % | 60 d | OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test) |
| Reaction mass of ethylbenzene and m-xylene and p-xylene | readily biodegradable | aerobic | 94 % | 28 d | OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test) |
| 4,4'- methylenediphenyl diisocyanate<br>101-68-8 | not readily biodegradable. | aerobic | 0 % | 28 d | OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test) |
| Hexane, 1,6-diisocyanato-, homopolymer, V=7000-11000 mPas/23<br>28182-81-2 | | aerobic | 1 % | 28 d | OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test) |
| 4-isocyanatosulphonyltoluene<br>4083-64-1 | readily biodegradable | aerobic | 83 % | 28 d | OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test) |
| dibutyltin dilaurate<br>77-58-7 | not readily biodegradable. | anaerobic | 23 % | 39 d | OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test) |

**12.3. Bioaccumulative potential**

The table below presents the data of the classified substances present in the mixture.

| Hazardous substances<br>CAS-No. | Bioconcentration factor (BCF) | Exposure time | Temperature | Species | Method |
|---|---|---|---|---|---|
| Reaction mass of ethylbenzene and m-xylene and p-xylene | 25,9 | 56 d | | Oncorhynchus mykiss | other guideline: |
| 4,4'- methylenediphenyl diisocyanate<br>101-68-8 | 92 - 200 | 28 d | | Cyprinus carpio | OECD Guideline 305 E (Bioaccumulation: Flow-through Fish Test) |
| dibutyltin dilaurate<br>77-58-7 | 31 - 155 | | | Cyprinus carpio | OECD Guideline 305 (Bioconcentration: Flow-through Fish Test) |

**12.4. Mobility in soil**

The table below presents the data of the classified substances present in the mixture.

| Hazardous substances<br>CAS-No. | LogPow | Temperature | Method |
|---|---|---|---|
| Reaction mass of ethylbenzene and m-xylene and p-xylene | 3,16 | 20 °C | other guideline: |
| 4,4'- methylenediphenyl diisocyanate<br>101-68-8 | 4,51 | 22 °C | OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method) |
| 4-isocyanatosulphonyltoluene<br>4083-64-1 | 0,6 | 30 °C | OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method) |
| dibutyltin dilaurate<br>77-58-7 | 4,44 | 20,8 °C | OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method) |

**12.5. Results of PBT and vPvB assessment**

The table below presents the data of the classified substances present in the mixture.

| Hazardous substances<br>CAS-No. | PBT / vPvB |
|---|---|
| Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics<br>----- | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| Reaction mass of ethylbenzene and m-xylene and p-xylene | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| Titanium dioxide < 1% particles with diameter ≤ 10 µm<br>13463-67-7 | According to Annex XIII to Regulation (EC) No 1907/2006, a PBT and vPvB assessment shall not be conducted for inorganic substances. |
| 4,4'- methylenediphenyl diisocyanate<br>101-68-8 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| Hexane, 1,6-diisocyanato-, homopolymer, V=7000-11000 mPas/23<br>28182-81-2 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| 4-isocyanatosulphonyltoluene<br>4083-64-1 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| dibutyltin dilaurate<br>77-58-7 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |

**12.6. Endocrine disrupting properties**

not applicable

**12.7. Other adverse effects**

No data available.

## SECTION 13: Disposal considerations

**13.1. Waste treatment methods**

Product disposal:
In consultation with the responsible local authority, must be subjected to special treatment.

Waste code

The valid EWC waste code numbers are source-related. The manufacturer is therefore unable to specify EWC waste codes for the articles or products used in the various sectors. The EWC codes listed are intended as a recommendation for users. We will be happy to advise you.
080409

## SECTION 14: Transport information

**14.1. UN number or ID number**

| | |
|---|---|
| ADR | Not dangerous goods |
| RID | Not dangerous goods |
| ADN | Not dangerous goods |
| IMDG | Not dangerous goods |
| IATA | Not dangerous goods |

**14.2. UN proper shipping name**

| | |
|---|---|
| ADR | Not dangerous goods |
| RID | Not dangerous goods |
| ADN | Not dangerous goods |
| IMDG | Not dangerous goods |
| IATA | Not dangerous goods |

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

| | |
|---|---|
| ADR | Not dangerous goods |
| RID | Not dangerous goods |
| ADN | Not dangerous goods |
| IMDG | Not dangerous goods |
| IATA | Not dangerous goods |

**14.4. Packing group**

| | |
|---|---|
| ADR | Not dangerous goods |
| RID | Not dangerous goods |
| ADN | Not dangerous goods |
| IMDG | Not dangerous goods |
| IATA | Not dangerous goods |

**14.5. Environmental hazards**

| | |
|---|---|
| ADR | not applicable |
| RID | not applicable |
| ADN | not applicable |
| IMDG | not applicable |
| IATA | not applicable |

**14.6. Special precautions for user**

| | |
|---|---|
| ADR | not applicable |
| RID | not applicable |
| ADN | not applicable |
| IMDG | not applicable |
| IATA | not applicable |

**14.7. Maritime transport in bulk according to IMO instruments**

not applicable

## SECTION 15: Regulatory information

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

| | |
|---|---|
| Ozone Depleting Substance (ODS) (Regulation (EC) No 1005/2009): | Not applicable |
| Prior Informed Consent (PIC) (Regulation (EU) No 649/2012): | Not applicable |
| Persistent organic pollutants (Regulation (EU) 2019/1021): | Not applicable |
| VOC content | 6,6 % |

(2010/75/EU)

**VOC Paints and Varnishes (EU):**
Product (sub)category: This product is not a subject of the Directive 2004/42/EC

**15.2. Chemical safety assessment**
A chemical safety assessment has been carried out.

**National regulations/information (Germany):**

WGK: WGK 1: slightly hazardous to water (Ordinance on facilities for handling substances that are hazardous to water (AwSV) )
Classification according to AwSV, Annex 1 (5.2)

BG regulations, rules, infos:
BG data sheet: BGI 524 Hazardous substances: polyurethane production and processing / isocyanates (M 044)

Storage class according to TRGS 510: 11

## SECTION 16: Other information

The labelling of the product is indicated in Section 2. The full text
of all abbreviations indicated by codes in this safety data sheet are as follows:

H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
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 Suspected of causing cancer.
H360FD May damage fertility. May damage 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.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.

| | |
|---|---|
| ED: | Substance identified as having endocrine disrupting properties |
| EU OEL: | Substance with a Union workplace exposure limit |
| EU EXPLD 1: | Substance listed in Annex I, Reg (EC) No. 2019/1148 |
| EU EXPLD 2 | Substance listed in Annex II, Reg (EC) No. 2019/1148 |
| SVHC: | Substance of very high concern (REACH Candidate List) |
| PBT: | Substance fulfilling persistent, bioaccumulative and toxic criteria |
| PBT/vPvB: | Substance fulfilling persistent, bioaccumulative and toxic plus very persistent and very bioaccumulative criteria |
| vPvB: | Substance fulfilling very persistent and very bioaccumulative criteria |

**Further information:**

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