

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

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TEROSON PU 6700 ME

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

#### 1.1. Product identifier

TEROSON PU 6700 ME

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

Intended use:

2-Component polyurethane adhesive

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

Henkel AG & Co. KGaA

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40589 Düsseldorf

Germany

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ua-productsafety.de@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):

Serious eye irritation H319 Causes serious eye irritation. Category 2

### 2.2. Label elements

# Label elements (CLP):

Hazard pictogram:



Signal word: Warning

**Hazard statement:** H319 Causes serious eye irritation.

**Precautionary statement:** P280 Wear eye protection.

Prevention

#### 2.3. Other hazards

Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

# **SECTION 3: Composition/information on ingredients**

#### 3.2. Mixtures

# General chemical description:

2-Component polyurethane adhesive

#### Base substances of preparation:

**Poly urethane** 

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

| Hazardous components<br>CAS-No.                              | EC Number<br>REACH-Reg No.    | content  | Classification                                  |
|--|-------------------------------|----------|---|
| 1,1',1"',1"''-Ethy lenedinitrilotetrapropan-2-ol<br>102-60-3 | 203-041-4<br>01-2119552434-41 | 10- 20 % | Eye Irrit. 2<br>H319                            |
| But ane-1,4-diol<br>110-63-4                                 | 203-786-5<br>01-2119471849-20 | 1-< 3%   | Acute Tox. 4; Oral<br>H302<br>STOT SE 3<br>H336 |

For full text of the H - statements and other abbreviations see section 16 "Other information". Substances without classification may have community workplace exposure limits available.

# **SECTION 4: First aid measures**

## 4.1. Description of first aid measures

Inhalation:

Move to fresh air, consult doctor if complaint persists.

Skin contact:

Rinse with running water and soap. Apply replenishing cream. Change all contaminated clothing.

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

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 respiratory protection equipment according to ambient air conditions.

## **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

Hy giene measures:

Do not eat, drink or smoke while working.

Wash hands before work breaks and after finishing work.

## 7.2. Conditions for safe storage, including any incompatibilities

Store in sealed original container.

Ensure good ventilation/extraction.

Protect from direct sun-light and temperature above  $50^{\circ}\text{C}$  in any case.

Store in a cool, dry place.

Temperatures between + 10 °C and + 25 °C

## 7.3. Specific end use(s)

2-Component polyurethane adhesive

# **SECTION 8: Exposure controls/personal protection**

# 8.1. Control parameters

#### **Occupational Exposure Limits**

Valid for

Germany

| Ingredient [Regulated substance] | ppm | mg/m <sup>3</sup> | ~ I                | Shortterm exposure limit category/Remarks         | Regulatorylist |
|----------------------------------|-----|-------------------|--------------------|---|----------------|
| But ane-1,4-diol<br>110-63-4     | 50  | 200               | Exposure limit(s): | 4   | TRGS 900       |
| But an e-1,4-diol<br>110-63-4    |     |                   | 1                  | Category II: substances with a resorptive effect. | TRGS 900       |

# $\label{eq:predicted} \textbf{Predicted No-Effect Concentration (PNEC):}$

| Name on list                                  | Environmental   |        | Value      | Value |            |         | Remarks |
|---|-----------------|--------|------------|-------|------------|---------|---------|
|   | Compartment     | perioa | mg/l       | ppm   | mg/kg      | others  |         |
| 1,1',1",1"'-Ethylenedinitrilotetrapropan-2-ol | aqua            |        | 0,085 mg/l | PP    |            | 0011015 |         |
| 102-60-3                                      | (freshwater)    |        | 1,,,,,,,,  |       |            |         |         |
| 1,1',1"'-Ethylenedinitrilotetrapropan-2-ol    | agua (marine    |        | 0.0085     |       |            |         |         |
| 102-60-3                                      | water)          |        | mg/l       |       |            |         |         |
| 1,1',1",1"'-Ethylenedinitrilotetrapropan-2-ol | aqua            |        | 1,51 mg/l  |       |            |         |         |
| 102-60-3                                      | (intermittent   |        | , 8        |       |            |         |         |
|   | releases)       |        |            |       |            |         |         |
| 1,1',1",1"'-Ethylenedinitrilotetrapropan-2-ol | sewage          |        | 70 mg/l    |       |            |         |         |
| 102-60-3                                      | treatment plant |        |            |       |            |         |         |
|   | (STP)           |        |            |       |            |         |         |
| 1,1',1",1"'-Ethylenedinitrilotetrapropan-2-ol | sediment        |        |            |       | 0,193      |         |         |
| 102-60-3                                      | (freshwater)    |        |            |       | mg/kg      |         |         |
| 1,1',1",1"'-Ethylenedinitrilotetrapropan-2-ol | sediment        |        |            |       | 0,0193     |         |         |
| 102-60-3                                      | (marine water)  |        |            |       | mg/kg      |         |         |
| 1,1',1",1"'-Ethylenedinitrilotetrapropan-2-ol | Soil            |        |            |       | 0,0183     |         |         |
| 102-60-3                                      |                 |        |            |       | mg/kg      |         |         |
| Butane-1,4-diol                               | aqua (marine    |        | 0,0813     |       |            |         |         |
| 110-63-4                                      | water)          |        | mg/l       |       |            |         |         |
| But ane-1,4-diol                              | aqua            |        | 8,13 mg/l  |       |            |         |         |
| 110-63-4                                      | (intermittent   |        |            |       |            |         |         |
|   | releases)       |        |            |       |            |         |         |
| But ane-1,4-diol                              | sediment        |        |            |       | 3,61 mg/kg |         |         |
| 110-63-4                                      | (freshwater)    |        |            |       |            |         |         |
| Butane-1,4-diol                               | sediment        |        |            |       | 0,361      |         |         |
| 110-63-4                                      | (marine water)  |        |            |       | mg/kg      |         |         |
| Butane-1,4-diol                               | Soil            |        |            |       | 0,244      |         |         |
| 110-63-4                                      |                 |        |            |       | mg/kg      |         |         |
| Butane-1,4-diol                               | sewage          |        | 1554 mg/l  |       |            |         |         |
| 110-63-4                                      | treatment plant |        |            |       |            |         |         |
|   | (STP)           |        |            |       |            |         |         |
| Butane-1,4-diol                               | aqua            |        | 0,813 mg/l |       |            |         |         |
| 110-63-4                                      | (freshwater)    |        |            |       |            |         |         |

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

| Name on list  | Application<br>Area   | Route of<br>Exposure | Health Effect                                      | Exposure<br>Time | Value      | Remarks |
|---|-----------------------|----------------------|--|------------------|------------|---------|
| 1,1',1",1"'-Ethylenedinitrilotetrapropan-2-ol<br>102-60-3 | Workers               | dermal               | Long term<br>exposure -<br>systemic effects        |                  | 4,2 mg/kg  |         |
| 1,1',1",1"'-Ethylenedinitrilotetrapropan-2-ol<br>102-60-3 | Workers               | Inhalation           | Long term<br>exposure -<br>systemic effects        |                  | 29,4 mg/m3 |         |
| 1,1',1",1"'-Ethylenedinitrilotetrapropan-2-ol<br>102-60-3 | General<br>population | dermal               | Long term<br>exposure -<br>systemic effects        |                  | 2,5 mg/kg  |         |
| 1,1',1",1"'-Ethylenedinitrilotetrapropan-2-ol<br>102-60-3 | General<br>population | Inhalation           | Long term<br>exposure -<br>systemic effects        |                  | 8,7 mg/m3  |         |
| 1,1',1",1"'-Ethylenedinitrilotetrapropan-2-ol<br>102-60-3 | General<br>population | oral                 | Long term<br>exposure -<br>systemic effects        |                  | 2,5 mg/kg  |         |
| Butane-1,4-diol<br>110-63-4                               | Workers               | dermal               | Long term<br>exposure -<br>systemic effects        |                  | 19 mg/kg   |         |
| Butane-1,4-diol<br>110-63-4                               | Workers               | Inhalation           | Long term<br>exposure -<br>systemic effects        |                  | 136 mg/m3  |         |
| Butane-1,4-diol<br>110-63-4                               | Workers               | inhalation           | Acute/short term<br>exposure -<br>systemic effects |                  | 958 mg/m3  |         |
| Butane-1,4-diol<br>110-63-4                               | General<br>population | Inhalation           | Acute/short term<br>exposure -<br>systemic effects |                  | 340 mg/m3  |         |
| Butane-1,4-diol<br>110-63-4                               | General<br>population | inhalation           | Long term<br>exposure -<br>systemic effects        |                  | 29 mg/m3   |         |
| Butane-1,4-diol<br>110-63-4                               | General<br>population | dermal               | Long term<br>exposure -<br>systemic effects        |                  | 8 mg/kg    |         |
| Butane-1,4-diol<br>110-63-4                               | General<br>population | oral                 | Long term<br>exposure -<br>systemic effects        |                  | 8 mg/kg    |         |

## **Biological Exposure Indices:**

None

## 8.2. Exposure controls:

Engineering controls:

Ensure good ventilation/extraction.

## Respiratory protection:

In case of dust formation, we recommend wearing of appropriate respiratory protection equipment with particle filter P (EN 14387).

This recommendation should be matched to local conditions.

## 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): Polychloroprene (CR; >= 1 mm thickness) or natural rubber (NR; >= 1 mm thickness) Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374): Polychloroprene (CR; >= 1 mm thickness) or natural rubber (NR; >= 1 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 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).

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

Appearance

paste grey

Odor characteristic

Odour threshold No data available / Not applicable

pН Not available.

No data available / Not applicable Melting point Solidification temperature No data available / Not applicable No data available / Not applicable Initial boiling point

Flash point Not applicable

Evaporation rate No data available / Not applicable Flammability No data available / Not applicable No data available / Not applicable Explosive limits Vapour pressure No data available / Not applicable Relative vapour density: No data available / Not applicable

Density 1,4 - 1,6 g/cm3

(20 °C (68 °F))

Bulk density No data available / Not applicable No data available / Not applicable Solubility Solubility (qualitative) No data available / Not applicable Partition coefficient: n-octanol/water No data available / Not applicable No data available / Not applicable Auto-ignition temperature No data available / Not applicable Decomposition temperature 16.000 mPa.s

Viscosity

(Bingham; 35 °C (95 °F))

No data available / Not applicable Viscosity (kinematic) No data available / Not applicable Explosive properties Oxidising properties No data available / Not applicable

## 9.2. Other information

No data available / Not applicable

# **SECTION 10: Stability and reactivity**

### 10.1. Reactivity

None if used for intended purpose.

#### 10.2. Chemical stability

Stable under recommended storage conditions.

## 10.3. Possibility of hazardous reactions

See section reactivity

#### 10.4. Conditions to avoid

None if used for intended purpose.

## 10.5. Incompatible materials

None if used properly.

## 10.6. Hazardous decomposition products

No decomposition if used according to specifications.

# **SECTION 11: Toxicological information**

#### General toxicological information:

The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation (EC) No 1272/2008. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

## 11.1. Information on toxicological effects

## Acute oral toxicity:

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

| Hazardous substances       | Value | Value       | Species | Method                                   |
|----------------------------|-------|-------------|---------|--|
| CAS-No.                    | type  |             |         |  |
| 1,1',1",1"'-               | LD50  | 2.890 mg/kg | rat     | OECD Guideline 401 (Acute Oral Toxicity) |
| Ethylenedinitrilotetraprop |       |             |         |  |
| an-2-ol                    |       |             |         |  |
| 102-60-3                   |       |             |         |  |
| But ane-1,4-diol           | LD50  | 1.500 mg/kg | rat     | BASF Test                                |
| 110-63-4                   |       |             |         |  |

## Acute dermal toxicity:

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

| Hazardous substances       | Value | Value         | Species | Method                                     |
|----------------------------|-------|---------------|---------|--|
| CAS-No.                    | type  |               |         |  |
| 1,1',1"',1"'-              | LD50  | > 2.000 mg/kg | rat     | OECD Guideline 402 (Acute Dermal Toxicity) |
| Ethylenedinitrilotetraprop |       |               |         |  |
| an-2-ol                    |       |               |         |  |
| 102-60-3                   |       |               |         |  |
| Butane-1,4-diol            | LD50  | > 2.000 mg/kg | rat     | BASF Test                                  |
| 110-63-4                   |       |               |         |  |

## Acute inhalative toxicity:

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

| Hazardous substances | Value | Value      | Test atmosphere | Exposure | Species | Method                    |
|----------------------|-------|------------|-----------------|----------|---------|---------------------------|
| CAS-No.              | type  |            |                 | time     |         |                           |
| Butane-1,4-diol      | LC50  | > 5,1 mg/l | dust/mist       | 4 h      | rat     | OECD Guideline 403 (Acute |
| 110-63-4             |       |            |                 |          |         | Inhalation Toxicity)      |

### Skin corrosion/irritation:

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

| Hazardous substances       | Result         | Exposure | Species | Method   |
|----------------------------|----------------|----------|---------|--|
| CAS-No.                    |                | time     |         |  |
| 1,1',1",1"'-               | not irritating | 4 h      | rabbit  | OECD Guideline 404 (Acute Dermal Irritation / Corrosion) |
| Ethylenedinitrilotetraprop |                |          |         |  |
| an-2-ol                    |                |          |         |  |
| 102-60-3                   |                |          |         |  |

# Serious eye damage/irritation:

Causes serious eye irritation.

| Hazardous substances       | Result     | Exposure | Species | Method  |
|----------------------------|------------|----------|---------|---|
| CAS-No.                    |            | time     | _       |   |
| 1,1',1",1"'-               | irritating |          | rabbit  | OECD Guideline 405 (Acute Eye Irritation / Corrosion) |
| Ethylenedinitrilotetraprop |            |          |         | •   |
| an-2-ol                    |            |          |         |   |
| 102-60-3                   |            |          |         |   |

# Respiratory or skin sensitization:

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

| Hazardous substances       | Result          | Test type               | Species    | Method                                  |
|----------------------------|-----------------|-------------------------|------------|---|
| CAS-No.                    |                 |                         |            |   |
| 1,1',1",1"'-               | not sensitising | Guinea pig maximisation | guinea pig | OECD Guideline 406 (Skin Sensitisation) |
| Ethylenedinitrilotetraprop |                 | test                    |            |   |
| an-2-ol                    |                 |                         |            |   |
| 102-60-3                   |                 |                         |            |   |

# Germ cell mutagenicity:

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

| Hazardous substances<br>CAS-No.                                  | Result   | Type of study/<br>Route of<br>administration           | Metabolic<br>activation /<br>Exposure time | Species | Method   |
|--|----------|--|--|---------|--|
| 1,1',1",1"-<br>Ethylenedinitrilotetraprop<br>an-2-ol<br>102-60-3 | negative | bacterial reverse<br>mutation assay (e.g<br>Ames test) | with and without                           |         | OECD Guideline 471<br>(Bacterial Reverse Mutation<br>Assay)              |
| 1,1',1",1"-<br>Ethylenedinitrilotetraprop<br>an-2-ol<br>102-60-3 | negative | in vitro mammalian<br>chromosome<br>aberration test    | with and without                           |         | OECD Guideline 473 (In vitro<br>Mammalian Chromosome<br>Aberration Test) |
| 1,1',1",1"-<br>Ethylenedinitrilotetraprop<br>an-2-ol<br>102-60-3 | negative | mammalian cell<br>gene mutation assay                  | with and without                           |         | OECD Guideline 476 (In vitro<br>Mammalian Cell Gene<br>Mutation Test)    |
| Butane-1,4-diol<br>110-63-4                                      | negative | bacterial reverse<br>mutation assay (e.g<br>Ames test) | with and without                           |         | OECD Guideline 471<br>(Bacterial Reverse Mutation<br>Assay)              |

## Carcinogenicity

No data available.

# 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   |
|--|----------------------|-----------|----------------------|---------|--|
| 1,1',1",1"'-<br>Ethylenedinitrilotetraprop | NOAEL P 1.000 mg/kg  | screening | oral: gavage         | rat     | OECD Guideline 422<br>(Combined Repeated Dose  |
| an-2-ol<br>102-60-3                        | NOAEL F1 1.000 mg/kg |           |                      |         | Toxicity Study with the<br>Reproduction /<br>Developmental Toxicity<br>Screening Test) |

# $STOT\text{-}single\ exposure:$

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       | Result / Value  | Route of     | Exposure time / | Species | Method                   |
|----------------------------|-----------------|--------------|-----------------|---------|--------------------------|
| CAS-No.                    |                 | application  | Frequency of    |         |                          |
|                            |                 |              | treatment       |         |                          |
| 1,1',1",1"'-               | NOAEL 300 mg/kg | oral: gavage | 30-49 d         | rat     | OECD Guideline 422       |
| Ethylenedinitrilotetraprop |                 |              | daily           |         | (Combined Repeated       |
| an-2-ol                    |                 |              |                 |         | Dose Toxicity Study with |
| 102-60-3                   |                 |              |                 |         | the Reproduction /       |
|                            |                 |              |                 |         | Developmental Toxicity   |
|                            |                 |              |                 |         | Screening Test)          |

## Aspiration hazard:

No data available.

# **SECTION 12: Ecological information**

## General ecological information:

The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation (EC) No 1272/2008. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following. 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.

| Hazardous substances          | Value | Value         | Exposure time | Species             | Method                    |
|-------------------------------|-------|---------------|---------------|---------------------|---------------------------|
| CAS-No.                       | type  |               | _             |                     |                           |
| 1,1',1",1"'-                  | LC50  | > 2.000 mg/l  | 96 h          | Leuciscus idus      | OECD Guideline 203 (Fish, |
| Ethylenedinitrilotetrapropan- |       |               |               |                     | Acute Toxicity Test)      |
| 2-ol                          |       |               |               |                     | -                         |
| 102-60-3                      |       |               |               |                     |                           |
| Butane-1,4-diol               | LC50  | > 10.000 mg/l | 96 h          | Pimephales promelas | OECD Guideline 203 (Fish, |
| 110-63-4                      |       |               |               |                     | Acute Toxicity Test)      |

## Toxicity (Daphnia):

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

| Hazardous substances        | Value | Value      | Exposure time | Species | Method   |
|-----------------------------|-------|------------|---------------|---------|--|
| CAS-No.                     | type  |            |               |         |  |
| Butane-1,4-diol<br>110-63-4 | EC50  | > 500 mg/l | 24 h          | 1       | OECD Guideline 202<br>(Daphnia sp. Acute<br>Immobilisation Test) |

## Chronic toxicity to aquatic invertebrates

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

| Hazardous substances<br>CAS-No. | Value<br>type | Value     | Exposure time | S pe cies     | Method        |
|---------------------------------|---------------|-----------|---------------|---------------|---------------|
| Butane-1,4-diol<br>110-63-4     | NOEC          | > 85 mg/l | 21 d          | Daphnia magna | not specified |

# Toxicity (Algae):

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

| Hazardous substances        | Value | Value      | Exposure time | Species | Method   |
|-----------------------------|-------|------------|---------------|---------|--|
| CAS-No.                     | type  |            |               |         |  |
| Butane-1,4-diol<br>110-63-4 | EC50  | > 500 mg/l | 72 h          |         | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |
| Butane-1,4-diol<br>110-63-4 | EC10  | 83 mg/l    | 72 h          | 1       | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |

# Toxicity to microorganisms

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

| Hazardous substances          | Value | Value        | Exposure time | Species | Method        |
|-------------------------------|-------|--------------|---------------|---------|---------------|
| CAS-No.                       | type  |              |               |         |               |
| 1,1',1",1"'-                  | EC0   | > 1.000 mg/l |               |         | not specified |
| Ethylenedinitrilotetrapropan- |       |              |               |         |               |
| 2-ol                          |       |              |               |         |               |
| 102-60-3                      |       |              |               |         |               |
| Butane-1,4-diol               | EC10  | 10.000 mg/l  | 16 h          |         | not specified |
| 110-63-4                      |       |              |               |         | _             |

# 12.2. Persistence and degradability

| Haz ardous substances         | Result                     | Test type | Degradability | Exposure | Method                          |
|-------------------------------|----------------------------|-----------|---------------|----------|---------------------------------|
| CAS-No.                       |                            |           |               | time     |                                 |
| 1,1',1",1"'-                  | not readily biodegradable. | aerobic   | 49 %          | 28 d     | OECD Guideline 301 D (Ready     |
| Ethylenedinitrilotetrapropan- |                            |           |               |          | Biodegradability: Closed Bottle |
| 2-ol                          |                            |           |               |          | Test)                           |
| 102-60-3                      |                            |           |               |          | ·                               |
| Butane-1,4-diol               | readily biodegradable      | aerobic   | 74 - 96 %     | 14 d     | OECD Guideline 301 C (Ready     |
| 110-63-4                      |                            |           |               |          | Biodegradability: Modified MITI |
|                               |                            |           |               |          | Test (I))                       |
| Butane-1,4-diol               | inherently biodegradable   | aerobic   | 90 - 100 %    | 7 d      | OECD Guideline 302 B (Inherent  |
| 110-63-4                      |                            |           |               |          | biodegradability: Zahn-         |
|                               |                            |           |               |          | Wellens/EMPA Test)              |

# 12.3. Bioaccumulative potential

No data available.

# 12.4. Mobility in soil

| Hazardous substances<br>CAS-No. | LogPow | Tempe rature | Method   |
|---------------------------------|--------|--------------|--|
| 1,1',1"',1"'-                   | -2,08  |              | not specified  |
| Ethylenedinitrilotetrapropan-   |        |              |  |
| 2-ol                            |        |              |  |
| 102-60-3                        |        |              |  |
| Butane-1,4-diol                 | -0,88  | 25 °C        | OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake |
| 110-63-4                        |        |              | Flask Method)  |

# 12.5. Results of PBT and vPvB assessment

| Hazardous substances                          | PBT/ vPvB  |
|---|--|
| CAS-No.                                       |  |
| 1,1',1",1"'-Ethylenedinitrilotetrapropan-2-ol | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very |
| 102-60-3                                      | Bioaccumulative (vPvB) criteria.   |
| Butane-1,4-diol                               | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very |
| 110-63-4                                      | Bioaccumulative(vPvB) criteria.  |

## 12.6. 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

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

## 14.2. UN proper shipping name

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

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

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

#### 14.4. Packing group

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

#### 14.5. Environmental hazards

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

#### 14.6. Special precautions for user

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

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

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 1005/2009/EC):

Prior Informed Consent (PIC) (Regulation 649/2012/EC):

Not applicable Persistent Organic Pollutants (POPs) (Regulation 2019/1021/EC):

Not applicable

#### EU. REACH, Annex XVII, Marketing and Use Restrictions (Regulation 1907/2006/EC): Not applicable

VOC content 0 %
(VOCV 814.018 VOC regulation
CH)

VOC content 0 %
(2010/75/EU)

## 15.2. Chemical safety assessment

A chemical safety assessment has not 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)

Storage class according to TRGS 510: 1

## **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:

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

#### **Further information:**

This Safety Data Sheet has been produced for sales from Henkel to parties purchasing from Henkel, is based on Regulation (EC) No 1907/2006 and provides information in accordance with applicable regulations of the European Union only. In that respect, no statement, warranty or representation of any kind is given as to compliance with any statutory laws or regulations of any other jurisdiction or territory other than the European Union. When exporting to territories other than the European Union, please consult with the respective Safety Data Sheet of the concerned territory to ensure compliance or liaise with Henkel's Product Safety and Regulatory Affairs Department (ua-productsafety.de@henkel.com) prior to export to other territories than the European Union.

This information is based on our current level of knowledge and relates to the product in the state in which it is delivered. It is intended to describe our products from the point of view of safety requirements and is not intended to guarantee any particular properties.

Relevant changes in this safety data sheet are indicated by vertical lines at the left margin in the body of this document. Corresponding text is displayed in a different color on shadowed fields.



# Safety Data Sheet according to (EC) No 1907/2006 as amended Page 1 of 14

SDS No.: 456295

V005.0

Revision: 12.04.2021

printing date: 09.08.2021 Replaces version from: 19.10.2020

TEROSON PU 6700 ME

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

#### 1.1. Product identifier

TEROSON PU 6700 ME

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

Intended use:

Part B for 2-K-Polyurethane 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 Fax-no.: +49 211 798 2009

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

ua-productsafety.de@henkel.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):

Acute toxicity Category 4

H332 Harmful if inhaled. Route of Exposure: Inhalation

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 1

H372 Causes damage to organs through prolonged or repeated exposure.

#### 2.2. Label elements

#### Label elements (CLP):

Hazard pictogram:



Contains Hexane, 1,6-diisocy anato-, homopoly mer, V=2750-4250 mPas/23

Cristobalite

Hexamethylene diisocyanate

Signal word: Danger

**Hazard statement:** H317 May cause an allergic skin reaction.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

H372 Causes 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

**Precautionary statement:** P260 Do not breathe dust/fume/spray.

**Prevention** P280 Wear protective gloves.

### 2.3. Other hazards

Persons suffering from allergic reactions to isocyanates should avoid contact with the product. Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

# **SECTION 3: Composition/information on ingredients**

#### 3.2. Mixtures

### General chemical description:

2-Component polyurethane adhesive

## Base substances of preparation:

Isocy anate prepoly mer

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

| Hazardous components                             | EC Number                     | content    | Classification            |
|--|-------------------------------|------------|---------------------------|
| CAS-No.  Hexane, 1,6-diisocyanato-, homopolymer, | <b>REACH-RegNo.</b> 500-060-2 | 60- 80 %   | A out a Toy At Inhelation |
|  |                               | 00- 80 %   | Acute Tox. 4; Inhalation  |
| V=2750-4250 mPas/23                              | 01-2119485796-17              |            | H332<br>STOT SE 3         |
| 28182-81-2                                       |                               |            | H335                      |
|  |                               |            | Skin Sens. 1              |
|  |                               |            |                           |
| City Latin                                       | 220 455 4                     | 10 . 20 0/ | H317                      |
| Cristobalite                                     | 238-455-4                     | 10-< 20 %  | STOT RE 1; Inhalation     |
| 14464-46-1                                       | 212 127 2                     | 0.07 0.7   | H372                      |
| Hexamethylene diisocyanate                       | 212-485-8                     | 0,05-<0,5% | Acute Tox. 4; Oral        |
| 822-06-0   | 01-2119457571-37              |            | H302                      |
|  |                               |            | Acute Tox. 1; Inhalation  |
|  |                               |            | H330                      |
|  |                               |            | Skin Irrit. 2             |
|  |                               |            | H315                      |
|  |                               |            | Skin Sens. 1              |
|  |                               |            | H317                      |
|  |                               |            | Resp. Sens. 1             |
|  |                               |            | H334                      |
|  |                               |            | STOT SE 3                 |
|  |                               |            | H335                      |
|  |                               |            | Eye Irrit. 2              |
|  |                               |            | H319                      |

For full text of the H - statements and other abbreviations see section 16 "Other information". Substances without classification may have community workplace exposure limits available.

## **SECTION 4: First aid measures**

## 4.1. Description of first aid measures

General information:

Symptoms of poisoning may occur even after several hours, continue medical observation for at least 48 hours after the accident.

Inhalation:

Fresh air, oxygen supply, warmth; seek specialist medical attention.

Skin contact:

IF ON SKIN: Wash with plenty of soap and water.

In case of adverse health effects seek medical advice.

Eye contact:

Rinse immediately with plenty of running water (for 10 minutes), seek medical attention from a specialist.

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.

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

#### 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.

Keep unprotected persons away.

Avoid contact with skin and eyes.

#### 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

Hy giene measures:

Do not eat, drink or smoke while working.

Wash hands before work breaks and after finishing work.

## 7.2. Conditions for safe storage, including any incompatibilities

Ensure good ventilation/extraction.

Store in a cool, dry place.

Temperatures between + 10  $^{\circ}$ C and + 25  $^{\circ}$ C

Protect from direct sunlight and temperatures above 50°C. The storage regulations for aerosols apply.

#### 7.3. Specific enduse(s)

Part B for 2-K-Polyurethane adhesive and sealant

# **SECTION 8: Exposure controls/personal protection**

# 8.1. Control parameters

# **Occupational Exposure Limits**

Valid for Germany

| In gredient [Regulated substance]                                      | ppm   | mg/m <sup>3</sup> | Value type                                  | Shortterm exposure limit category/Remarks  | Regulatory list |
|--|-------|-------------------|---|--|-----------------|
| Cristobalite<br>14464-46-1   |       | 0,3               | 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        |
| Cristobalite<br>14464-46-1   |       | 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        |
| Cristobalite<br>14464-46-1<br>[RESPIRABLE CRYST ALLINE SILICA<br>DUST] |       | 0,1               | Time Weighted Average (TWA):                |  | EU OELIII       |
| Hexamethylene diisocyanate 822-06-0                                    |       |                   | Short Term Exposure<br>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        |
| Hexamethylene diisocyanate<br>822-06-0                                 |       |                   | STEL (Short Term<br>Exposure Limit) factor: | Substance listed with both Peak factor and STEL factor. The Peak factor is supplied with the AGW values.                                       | TRGS 900        |
| Hexamethylene diisocyanate 822-06-0                                    | 0,005 | 0,035             | Exposure limit(s):                          | 2  | TRGS 900        |

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

| Name on list                                      | En vi ronmental<br>Compartment     | Value      |     |                 |        | Remarks |
|---|------------------------------------|------------|-----|-----------------|--------|---------|
|   |                                    | mg/l       | ppm | mg/kg           | others |         |
| Hexane, 1,6-diisocyanato-, homopolymer 28182-81-2 | aqua<br>(freshwater)               | 0,127 mg/l |     |                 |        |         |
| Hexane, 1,6-diisocyanato-, homopolymer 28182-81-2 | aqua (marine<br>water)             | 0,013 mg/l |     |                 |        |         |
| Hexane, 1,6-diisocyanato-, homopolymer 28182-81-2 | aqua<br>(intermittent<br>releases) | 1,27 mg/l  |     |                 |        |         |
| Hexane, 1,6-diisocyanato-, homopolymer 28182-81-2 | sediment<br>(freshwater)           |            |     | 266701<br>mg/kg |        |         |
| Hexane, 1,6-diisocyanato-, homopolymer 28182-81-2 | sediment<br>(marine water)         |            |     | 26670<br>mg/kg  |        |         |
| Hexane, 1,6-diisocyanato-, homopolymer 28182-81-2 | Soil                               |            |     | 53183<br>mg/kg  |        |         |
| Hexane, 1,6-diisocyanato-, homopolymer 28182-81-2 | sewage<br>treatment plant<br>(STP) | 88 mg/l    |     |                 |        |         |
| Hexamethylene diisocyanate 822-06-0               | sewage<br>treatment plant<br>(STP) | 8,42 mg/l  |     |                 |        |         |

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

| Name on list                                      | Application<br>Area | Route of<br>Exposure | Health Effect                                   | Exposure<br>Time | Value       | Remarks |
|---|---------------------|----------------------|---|------------------|-------------|---------|
| Hexane, 1,6-diisocyanato-, homopolymer 28182-81-2 | Workers             | inhalation           | Acute/short term<br>exposure - local<br>effects |                  | 1 mg/m3     |         |
| Hexane, 1,6-diisocyanato-, homopolymer 28182-81-2 | Workers             | inhalation           | Long term<br>exposure - local<br>effects        |                  | 0,5 mg/m3   |         |
| Hexamethylene diisocyanate 822-06-0               | Workers             | inhalation           | Acute/short term<br>exposure - local<br>effects |                  | 0,07 mg/m3  |         |
| Hexamethylene diisocyanate 822-06-0               | Workers             | inhalation           | Long term<br>exposure - local<br>effects        |                  | 0,035 mg/m3 |         |

#### **Biological Exposure Indices:**

| Ingredient [Regulated substance]    | Parameters                                       | Biological specimen | Sampling time                |         | Basis of biol.<br>exposure index | <br>Additional<br>Information |
|-------------------------------------|--|---------------------|------------------------------|---------|----------------------------------|-------------------------------|
| Hexamethylene diisocyanate 822-06-0 | Hexamethyle<br>nediamine<br>(with<br>hydrolysis) |                     | Sampling time: End of shift. | 15 μg/g | DE BGW                           |                               |

#### 8.2. Exposure controls:

Engineering controls:

Use only in well ventilated areas.

#### Respiratory protection:

Ensure good ventilation/suction at the workplace.

#### 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).

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

Appearance paste

paste white

Odor characteristic

Odour threshold No data available / Not applicable

pH Not available.

Melting point No data available / Not applicable Solidification temperature No data available / Not applicable Initial boiling point No data available / Not applicable

Flash point Not applicable

Evaporation rate

No data available / Not applicable
Flammability

No data available / Not applicable
Explosive limits

No data available / Not applicable
Vapour pressure

No data available / Not applicable
Relative vapour density:

No data available / Not applicable

Density 1,22 - 1,3 g/cm<sup>3</sup>

(20 °C (68 °F))

Bulk density

No data available / Not applicable
Solubility

No data available / Not applicable
Solubility (qualitative)

Partition coefficient: n-octanol/water

Auto-ignition temperature

Decomposition temperature

No data available / Not applicable
No data available / Not applicable
No data available / Not applicable

Viscosity 4.000 mPa.s

(Bingham; Instrument: Physica Rheolab; 35 °C

(95 °F))

Viscosity (kinematic)

Explosive properties

Oxidising properties

No data available / Not applicable
No data available / Not applicable
No data available / Not applicable

### 9.2. Other information

No data available / Not applicable

## **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:

Persons suffering from allergic reactions to isocyanates should avoid contact with the product.

#### 11.1. Information on toxicological effects

## Acute oral toxicity:

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

| Hazardous substances      | Value | Value         | Species | Method  |
|---------------------------|-------|---------------|---------|---|
| CAS-No.                   | type  |               |         |   |
| Hexane, 1,6-diisocyanato- | LD50  | > 2.000 mg/kg | rat     | OECD Guideline 423 (Acute Oral toxicity)                |
| , homopolymer, V=2750-    |       |               |         |   |
| 4250 mPas/23              |       |               |         |   |
| 28182-81-2                |       |               |         |   |
| Cristobalite              | LD50  | 3.160 mg/kg   | rat     | not specified   |
| 14464-46-1                |       |               |         |   |
| Hexamethylene             | LD50  | 746 mg/kg     | rat     | equivalent or similar to OECD Guideline 401 (Acute Oral |
| diisocyanate              |       |               |         | Toxicity)   |
| 822-06-0                  |       |               |         |   |

### Acute dermal toxicity:

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

| Hazardous substances      | Value | Value         | Species | Method                                     |
|---------------------------|-------|---------------|---------|--|
| CAS-No.                   | type  |               |         |  |
| Hexane, 1,6-diisocyanato- | LD50  | > 2.000 mg/kg | rat     | OECD Guideline 402 (Acute Dermal Toxicity) |
| , homopolymer, V=2750-    |       |               |         |  |
| 4250 mPas/23              |       |               |         |  |
| 28182-81-2                |       |               |         |  |
| Hexamethylene             | LD50  | > 7.000 mg/kg | rat     | OECD Guideline 402 (Acute Dermal Toxicity) |
| diisocyanate              |       |               |         |  |
| 822-06-0                  |       |               |         |  |

## Acute inhalative toxicity:

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

| Hazardous substances      | Value    | Value      | Test atmosphere | Exposure | Species | Method                    |
|---------------------------|----------|------------|-----------------|----------|---------|---------------------------|
| CAS-No.                   | type     |            |                 | time     |         |                           |
| Hexane, 1,6-diisocyanato- | Acute    | 1,5 mg/l   | dust/mist       |          |         | Expert judgement          |
| , homopolymer, V=2750-    | toxicity |            |                 |          |         |                           |
| 4250 mPas/23              | estimate |            |                 |          |         |                           |
| 28182-81-2                | (ATE)    |            |                 |          |         |                           |
| Hexamethylene             | LC50     | 0,124 mg/l | vapour          | 4 h      | rat     | OECD Guideline 403 (Acute |
| diisocyanate              |          |            |                 |          |         | Inhalation Toxicity)      |
| 822-06-0                  |          |            |                 |          |         | 2.                        |

# Skin corrosion/irritation:

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

| Hazardous substances      | Result     | Exposure | Species | Method   |
|---------------------------|------------|----------|---------|--|
| CAS-No.                   |            | time     |         |  |
| Hexane, 1,6-diisocyanato- | slightly   | 4 h      | rabbit  | OECD Guideline 404 (Acute Dermal Irritation / Corrosion) |
| , homopolymer, V=2750-    | irritating |          |         |  |
| 4250 mPas/23              |            |          |         |  |
| 28182-81-2                |            |          |         |  |

# Serious eye damage/irritation:

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

| Hazardous substances      | Result     | Exposure | Species | Method  |
|---------------------------|------------|----------|---------|---|
| CAS-No.                   |            | time     |         |   |
| Hexane, 1,6-diisocyanato- | slightly   |          | rabbit  | OECD Guideline 405 (Acute Eye Irritation / Corrosion) |
| , homopolymer, V=2750-    | irritating |          |         | -   |
| 4250 mPas/23              |            |          |         |   |
| 28182-81-2                |            |          |         |   |

# 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                                  |
|--|-------------|------------------------------|------------|---|
| Hexane, 1,6-diisocyanato, homopolymer, V=2750-4250 mPas/23<br>28182-81-2 | sensitising | Guinea pig maximisation test | guinea pig | OECD Guideline 406 (Skin Sensitisation) |
| Hexamethylene diisocyanate 822-06-0                                      | sensitising | Respiratory sensitisation    | guinea pig | not specified                           |
| Hexamethylene<br>diisocyanate<br>822-06-0                                | sensitising | 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<br>CAS-No.  | Result   | Type of study/<br>Route of<br>administration           | Metabolic<br>activation /<br>Exposure time | Species | Method   |
|--|----------|--|--|---------|--|
| Hexane, 1,6-diisocyanato, homopolymer, V=2750-4250 mPas/23 28182-81-2  | negative | bacterial reverse<br>mutation assay (e.g<br>Ames test) | with and without                           |         | OECD Guideline 471<br>(Bacterial Reverse Mutation<br>Assay)              |
| Hexane, 1,6-diisocyanato, homopolymer, V=2750-4250 mPas/23 28182-81-2  | negative | mammalian cell<br>gene mutation assay                  | with and without                           |         | OECD Guideline 476 (In vitro<br>Mammalian Cell Gene<br>Mutation Test)    |
| Hexane, 1,6-diisocyanato-, homopolymer, V=2750-4250 mPas/23 28182-81-2 | negative | in vitro mammalian<br>chromosome<br>aberration test    | with and without                           |         | OECD Guideline 473 (In vitro<br>Mammalian Chromosome<br>Aberration Test) |
| Hexamethylene<br>diisocyanate<br>822-06-0                              | negative | bacterial reverse<br>mutation assay (e.g<br>Ames test) | with and without                           |         | OECD Guideline 471<br>(Bacterial Reverse Mutation<br>Assay)              |
| Hexamethylene<br>diisocyanate<br>822-06-0                              | negative | mammalian cell<br>gene mutation assay                  | with and without                           |         | not specified  |
| Hexamethylene<br>diisocyanate<br>822-06-0                              | negative | inhalation: vapour                                     |  | mouse   | OECD Guideline 474<br>(Mammalian Erythrocyte<br>Micronucleus Test)       |

#### Carcinogenicity

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

| Hazardous components<br>CAS-No.           | Result           | Route of application  | Exposure<br>time /<br>Frequency<br>of treatment | Species | Sex         | Method  |
|---|------------------|-----------------------|---|---------|-------------|---|
| Hexamethylene<br>diisocyanate<br>822-06-0 | not carcinogenic | inhalation:<br>vapour | 2 y<br>6 h/d, 5 d/w                             | rat     | male/female | OECD Guideline 453<br>(Combined Chronic<br>Toxicity/<br>Carcinogenicity<br>Studies) |

# Reproductive toxicity:

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

| Hazardous substances | Result / Value   | Test type | Route of    | Species | Method                  |
|----------------------|------------------|-----------|-------------|---------|-------------------------|
| CAS-No.              |                  |           | application |         |                         |
| Hexamethylene        | NOAEL P 0.3 ppm  | screening | inhalation: | rat     | OECD Guideline 422      |
| diisocyanate         |                  |           | vapour      |         | (Combined Repeated Dose |
| 822-06-0             | NOAEL F1 0.3 ppm |           |             |         | Toxicity Study with the |
|                      |                  |           |             |         | Reproduction/           |
|                      |                  |           |             |         | Developmental Toxicity  |
|                      |                  |           |             |         | Screening Test)         |

# $STOT\text{-}single\,exposure:\\$

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 /<br>Frequency of<br>treatment | Species | Method  |
|---|-----------------|-----------------------|--|---------|---|
| Hexamethylene<br>diisocyanate<br>822-06-0 | NOAEL 0.005 ppm | inhalation:<br>vapour | 2 y<br>6 h/d, 5 d/w                          | rat     | OECD Guideline 453<br>(Combined Chronic<br>Toxicity / Carcinogenicity<br>Studies) |

# Aspiration hazard:

No data available.

# **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.

| Hazardous substances       | Value | Value      | Exposure time | Species                      | Method                    |
|----------------------------|-------|------------|---------------|------------------------------|---------------------------|
| CAS-No.                    | type  |            |               |                              |                           |
| Hexane, 1,6-diisocyanato-, | LC50  | > 100 mg/l | 96 h          | Brachydanio rerio (new name: | OECD Guideline 203 (Fish, |
| homopolymer, V=2750-4250   |       | _          |               | Danio rerio)                 | Acute Toxicity Test)      |
| mPas/23                    |       |            |               |                              |                           |
| 28182-81-2                 |       |            |               |                              |                           |
| Hexamethylene diisocyanate | LC50  | 82,8 mg/l  | 96 h          | Brachydanio rerio (new name: | EU Method C.1 (Acute      |
| 822-06-0                   |       |            |               | Danio rerio)                 | Toxicity for Fish)        |

## Toxicity (Daphnia):

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

| Hazardous substances<br>CAS-No.   | Value<br>type | Value      | Exposure time | S pe cies     | Method   |
|---|---------------|------------|---------------|---------------|--|
| Hexane, 1,6-diisocyanato-,<br>homopolymer, V=2750-4250<br>mPas/23<br>28182-81-2 | EC50          | > 100 mg/l | 48 h          | Daphnia magna | OECD Guideline 202<br>(Daphnia sp. Acute<br>Immobilisation Test) |
| Hexamethylene diisocyanate 822-06-0   | EC50          | 89,1 mg/l  | 48 h          | Daphnia magna | EU Method C.2 (Acute<br>Toxicity for Daphnia)                    |

# Chronic toxicity to aquatic invertebrates

No data available.

### Toxicity (Algae):

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

| Hazardous substances<br>CAS-No.   | Value | Value        | Exposure time | Species | Method   |
|---|-------|--------------|---------------|---------|--|
| Hexane, 1,6-diisocyanato-,<br>homopolymer, V=2750-4250<br>mPas/23<br>28182-81-2 | EC50  | > 1.000 mg/l | 72 h          |         | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |
| Hexamethylene diisocyanate 822-06-0   | EC50  | > 77,4 mg/l  | 72 h          |         | EU Method C.3 (Algal<br>Inhibition test)             |
| Hexamethylene diisocyanate 822-06-0   | NOEC  | l 1,7 mg/l   | 72 h          | 1 '     | EU Method C.3 (Algal<br>Inhibition test)             |

## Toxicity to microorganisms

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

| Hazardous substances  | Value | Value        | Exposure time | Species          | Method   |
|---|-------|--------------|---------------|------------------|--|
| CAS-No.   | type  |              |               |                  |  |
| Hexane, 1,6-diisocyanato-,<br>homopolymer, V=2750-4250<br>mPas/23<br>28182-81-2 | EC50  | > 1.000 mg/l | 3 h           | activated sludge | OECD Guideline 209<br>(Activated Sludge,<br>Respiration Inhibition Test) |
| Hexamethylene diisocyanate 822-06-0   | EC 50 | 842 mg/l     | 3 h           | activated sludge | OECD Guideline 209<br>(Activated Sludge,<br>Respiration Inhibition Test) |

# 12.2. Persistence and degradability

| Hazardous substances  | Result                     | Test type | Degradability | Exposure | Method  |
|---|----------------------------|-----------|---------------|----------|---|
| CAS-No.   |                            |           |               | time     |   |
| Hexane, 1,6-diisocyanato-,<br>homopolymer, V=2750-4250<br>mPas/23<br>28182-81-2 | not readily biodegradable. | aerobic   | 0 %           | 28 d     | OECD Guideline 301 C (Ready<br>Biodegradability: Modified MITI<br>Test (I))       |
| Hexamethylene diisocyanate 822-06-0   | not readily biodegradable. | aerobic   | 42 %          | 28 d     | OECD Guideline 301 F (Ready<br>Biodegradability: Manometric<br>Respirometry Test) |

## 12.3. Bioaccumulative potential

| Hazardous substances       | Bioconcentratio | Exposure time | Tempe rature | Species     | Method                          |
|----------------------------|-----------------|---------------|--------------|-------------|---------------------------------|
| CAS-No.                    | n factor (BCF)  |               |              |             |                                 |
| Hexane, 1,6-diisocyanato-, | 3,2             |               |              | calculation | OECD Guideline 305              |
| homopolymer, V=2750-4250   |                 |               |              |             | (Bioconcentration: Flow-through |
| mPas/23                    |                 |               |              |             | Fish Test)                      |
| 28182-81-2                 |                 |               |              |             |                                 |
| Hexamethylene diisocyanate | 57,6            |               |              | calculated  | QSAR (Quantitative Structure    |
| 822-06-0                   |                 |               |              |             | Activity Relationship)          |

# 12.4. Mobility in soil

| Hazardous substances<br>CAS-No.     | LogPow | Temperature | Method  |
|-------------------------------------|--------|-------------|---|
| Hexamethylene diisocyanate 822-06-0 | 3,20   | 25 °C       | QSAR (Quantitative Structure Activity Relationship) |

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

| Hazardous substances                    | PBT/vPvB   |
|---|--|
| CAS-No.                                 |  |
| Hexane, 1,6-diisocyanato-, homopolymer, | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very |
| V=2750-4250 mPas/23                     | Bioaccumulative (vPvB) criteria.   |
| 28182-81-2                              |  |
| Hexamethylene diisocyanate              | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very |
| 822-06-0                                | Bioaccumulative (vPvB) criteria.   |

# 12.6. 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

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

14.2. UN proper shipping name

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

14.3. Transport hazard class(es)

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

14.4. Packing group

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

14.5. Environmental hazards

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

14.6. Special precautions for user

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

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

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 1005/2009/EC):

Prior Informed Consent (PIC) (Regulation 649/2012/EC):

Not applicable Persistent Organic Pollutants (POPs) (Regulation 2019/1021/EC):

Not applicable

# EU. REACH, Annex XVII, Marketing and Use Restrictions (Regulation 1907/2006/EC): Not applicable

VOC content 0 % (2010/75/EU)

# 15.2. Chemical safety assessment

A chemical safety assessment has not 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:

 $BG\ data\ sheet:\ BGI\ 524\ Hazardous\ substances:\ polyure than e\ production$ 

and processing / isocyanates (M 044)

Storage class according to TRGS 510:

General remarks (DE): This product is in scope of the German regulation

"ChemikalienVerbotsVerordnung"

## 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:

H302 Harmful if swallowed.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H330 Fatal if inhaled.

H332 Harmful if inhaled.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335 May cause respiratory irritation.

H372 Causes damage to organs through prolonged or repeated exposure.

#### **Further information:**

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