

**1. Identification of the substance/mixture and of the company/undertaking****Product identifier**

Product name: **TEKINJECT PU 1C FLEX 55**  
Type of product : Mixture

**Relevant identified uses of the substance or mixture and uses advised against**

Identified uses: Only for professional use.

**Details of the supplier of the safety data sheet**

Company: TEKINJECT BV  
Kruisblok 6  
BE - 2320 HOOGSTRATEN  
E-mail address: [info@tekinject.com](mailto:info@tekinject.com)

**Emergency telephone number**

24-hours emergency number: +32 494 239 441

National poison information service: This is a generic EU Safety Data Sheet. Consult your Specific member state version for this information.

**2. Hazard Identification**

GHS08 health hazard

|               |   |
|---------------|---|
| Resp. Sens. 1 | H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| Carc. 2       | H351 Suspected of causing cancer.   |
| STOT RE2      | H373 May cause damage to organs through prolonged or repeated exposure.         |



GHS07

|               |   |
|---------------|---|
| Acute tox. 4  | H332 Harmful if inhaled.                  |
| Skin irrit. 2 | H315 Causes skin irritation.              |
| Eye Irrit. 2  | H319 Causes serious eye irritation.       |
| Skin Sens. 1  | H317 May cause an allergic skin reaction. |
| STOT SE 3     | H335 May cause respiratory irritation.    |

**Label elements****Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

**Hazard pictograms**

GHS 08



GHS 07

**Signal word: Danger****Hazard-determination components of labeling:**

Diphenylmethanediisocyanate, isomers and homologues.

Isocyanic acid, polymethylenepolyphenylene ester, polymer with . alpha. – hydro. – omega –

hydroxypolyoxy(methyl-1,2-ethanediyl)

4,4'-methylenediphenyl diisocyanate

Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)fenylisocyanate

**Hazard statements:**

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

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

H351 Suspected of causing cancer.

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

**Precautionary statements:**

P260 Do not breathe dust/mist/fume/gas/vapours/spray.

P261 Avoid breathing dust/fumes/gas/mist/vapours/spray.

P284 In case of inadequate ventilation, wear respiratory protection.

P305+P351+P338 IF IN EYES: rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P403+P233 Store in well-ventilated place. Keep container tightly closed.









P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**Additional information: Contains isocyanates. May produce an allergic reaction.****Other hazards****Results of PBT and vPvB assessment:**

**PBT:** Not applicable

**vPvB:** Not applicable

**3. Composition/information on ingredients**
**Description:** mixture of substances with nonhazardous additions.

| <b>Dangerous components :</b>        |   |  |             |
|--------------------------------------|---|--|-------------|
| CAS 9016-87-9                        | Diphenylmethanediisocyanate, isomers and homologues   | <br>Resp. Sens. 1, H334 ; Carc. 2, H351 ; STOT RE 2, H373<br><br><br>Acute tox. 4, H332 ; Skin Irritant 2, H315 ; eye Irrit. 2, H319 ; skin sense. 1, H317 ; STOT SE3 H335     | 40 – 100 %  |
| CAS : 53862-89-8                     | Isocyanic acid, polymethylenepolyphenylene ester, polymer with apha. – hydro. -omega.-hydroxypolyoxy(methyl-1,2-ethanediyl) | <br>Resp. Sens. 1, H334 ; Carc. 2, H351 ; STOT RE 2, H373<br><br><br>Acute tox. 4, H332 ; Skin Irritant 2, H315 ; eye Irrit. 2, H319 ; skin sense. 1, H317 ; STOT SE3 H335    | 5 – 35 %    |
| CAS : 101-68-8<br>EINECS : 202-966-0 | 4,4'-methylenediphenyl diisocyanate   | <br>Resp. Sens. 1, H334 ; Carc. 2, H351 ; STOT RE 2, H373<br><br><br>Acute tox. 4, H332 ; Skin Irritant 2, H315 ; eye Irrit. 2, H319 ; skin sense. 1, H317 ; STOT SE3 H335 | 0 - ≤ 3,5 % |
|                                      | Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatebenzyl)fenylisocyanate                              | <br>Resp. Sens. 1, H334 ; Carc. 2, H351 ; STOT RE 2, H373<br><br><br>Acute tox. 4, H332 ; Skin Irritant 2, H315 ; eye Irrit. 2, H319 ; skin sense. 1, H317 ; STOT SE3 H335 | 0 - ≤ 3,5 % |

**Additional information:** For the wording of the listed hazard phrases refer to section 16.

#### **4. First aid measures**

- **Description of first aid measures.**
- **General information:** Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:** Supply fresh air and to be sure call for a doctor. In case of unconsciousness place the patient stable inside position for transportation.
- **After skin contact:** Immediately remove as much product as possible, using a dry cloth, a towel, a paper towel or tissues. Thoroughly use a waterless soap to remove the remaining product. Afterwards rinse and wash with water and soap.
- **After eye contact:** immediately remove as much product around the eyes as possible, using a dry cloth, a towel, a paper towel or tissues. Rinse opened eye for several minutes under running water, then consult a doctor.
- **After swallowing:** If symptoms persist, consult a doctor.

#### **5. Fire-fighting measures**

- **Extinguishing media.**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **Special hazards arising from the substance or mixture:** no relevant information available.
- **Advise for firefighters:** No relevant information available.
- **Protective equipment:** No special measures required.

#### **6. Accidental releases measures**

- **Personal precautions, protective equipment and emergency procedures:** Not required.
- **Environmental precautions:** Do not allow to enter sewers/surface or ground water.
- **Methods and material for containment and cleaning up:** Absorb with liquid-binding material (sand, diatomite, acid binder, universal binder, sawdust). Use neutralizing agent. Dispose contaminated material as waste according to section 13. Ensure adequate ventilation.
- **References to other sections**  
See section 7 for information and safe handling.  
See section 8 for information on personal protection equipment.  
See section 13 for disposal information.

#### **7. Handling and storage**

- **Precautions for safe handling:** ensure good ventilation/exhaustion at the workplace. Prevent formation of aerosols.
- **Information about fire- and explosion protection:** No special measures required.
- **Conditions for safe storage, including any incompatibilities.**
- **Storage:** No special requirements
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **Specific end use(s):** No further relevant information available.

## 8. Exposure control/personal protection

- **Additional information about design of technical facilities:** No further data; see section 7.
- **Control parameters**

| <b>Ingredients with limit values that require monitoring at the workplace:</b> |  |
|--|--|
| <b>9016-87-9 diphenylmethanediisocyanate, isomers and homologues</b>           |  |
| WEL  | Short-term value: 0,07 mg/m <sup>3</sup><br>Long-term value: 0,02 mg/m <sup>3</sup><br>Sen; as -NCO                                    |
| <b>101-68-8 4'4'-methylenediphenyl diisocyanate</b>                            |  |
| WEL  | Short-term value: 0,07 mg/m <sup>3</sup><br>Long-term value: 0,02 mg/m <sup>3</sup><br>Sen; as -NCO                                    |
| <b>Ingredients with biological limit values:</b>                               |  |
| <b>101-68-8 4'4'-methylenediphenyl diisocyanate</b>                            |  |
| BMGV   | 1 µmol creatinine/mol<br>Medium: urine<br>Sampling time: at the end of the period of exposure<br>Parametr: isocyanate-derived diamine. |

- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **Personal protective equipment.**
- **General protective and hygienic measures:**  
Keep away from foodstuffs, beverages, and feed.  
Immediately remove all soiled and contaminated clothing.  
Wash hands before break and at the end of the work.  
Avoid contact with eyes and skin.
- **Respiratory protection:**  
In case of brief exposure or low pollution, use respiratory filter device. In case of intensive or longer exposure, use self-contained respiratory protection device.
- **Protection of hands:**



Protective gloves

The glove material must be impermeable and resistant to the product/the substances/the preparation. Due to missing tests no recommendation to the glove material can be given. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

- **Material of gloves:**  
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material:**  
The exact break through time must be found out by the manufacturer of the protective gloves and must be observed.
- **Eye protection:**



Tightly sealed goggles.

**9. Physical and technical properties**

|  |   |                                      |                 |   |                 |                           |                                  |
|--|---|--------------------------------------|-----------------|---|-----------------|---------------------------|----------------------------------|
| <ul style="list-style-type: none"> <li>· <b>Information on basic physical and chemical properties</b></li> <li>· <b>General information</b></li> <li>· <b>Appearance:</b> <table style="width: 100%; border: none;"> <tr> <td style="padding-left: 20px;"><b>Form</b></td> <td>Liquid</td> </tr> <tr> <td style="padding-left: 20px;"><b>Colour</b></td> <td>Light brown</td> </tr> <tr> <td style="padding-left: 20px;"><b>Odour</b></td> <td>Characteristic.</td> </tr> </table> </li> </ul> |   | <b>Form</b>                          | Liquid          | <b>Colour</b>                                   | Light brown     | <b>Odour</b>              | Characteristic.                  |
| <b>Form</b>  | Liquid  |                                      |                 |   |                 |                           |                                  |
| <b>Colour</b>  | Light brown                                   |                                      |                 |   |                 |                           |                                  |
| <b>Odour</b>   | Characteristic.                               |                                      |                 |   |                 |                           |                                  |
| · <b>pH-value:</b>   | Not determined.                               |                                      |                 |   |                 |                           |                                  |
| <ul style="list-style-type: none"> <li>· <b>Change in condition</b> <table style="width: 100%; border: none;"> <tr> <td style="padding-left: 20px;"><b>Melting point/freezing point:</b></td> <td>Not determined.</td> </tr> <tr> <td style="padding-left: 20px;"><b>Initial boiling point and boiling range:</b></td> <td>Not determined.</td> </tr> </table> </li> </ul>   |   | <b>Melting point/freezing point:</b> | Not determined. | <b>Initial boiling point and boiling range:</b> | Not determined. |                           |                                  |
| <b>Melting point/freezing point:</b>   | Not determined.                               |                                      |                 |   |                 |                           |                                  |
| <b>Initial boiling point and boiling range:</b>  | Not determined.                               |                                      |                 |   |                 |                           |                                  |
| · <b>Ignition temperature</b>  | 400 °C  |                                      |                 |   |                 |                           |                                  |
| · <b>Flash point:</b>  | Not applicable                                |                                      |                 |   |                 |                           |                                  |
| · <b>Flammability (solid,gas):</b>   | Not applicable.                               |                                      |                 |   |                 |                           |                                  |
| · <b>Decomposition temperature:</b>  | Not determined.                               |                                      |                 |   |                 |                           |                                  |
| · <b>Auto-ignition temperature:</b>  | Product is not selfigniting.                  |                                      |                 |   |                 |                           |                                  |
| · <b>Explosive properties:</b>   | Product does not present an explosion hazard. |                                      |                 |   |                 |                           |                                  |
| <ul style="list-style-type: none"> <li>· <b>Explosion limits :</b> <table style="width: 100%; border: none;"> <tr> <td style="padding-left: 20px;"><b>Lower:</b></td> <td>1,5 Vol %</td> </tr> <tr> <td style="padding-left: 20px;"><b>Upper:</b></td> <td>12,5 Vol %</td> </tr> </table> </li> </ul>  |   | <b>Lower:</b>                        | 1,5 Vol %       | <b>Upper:</b>                                   | 12,5 Vol %      |                           |                                  |
| <b>Lower:</b>  | 1,5 Vol %                                     |                                      |                 |   |                 |                           |                                  |
| <b>Upper:</b>  | 12,5 Vol %                                    |                                      |                 |   |                 |                           |                                  |
| · <b>Vapour pressure at 20 °C:</b>   | Not determined.                               |                                      |                 |   |                 |                           |                                  |
| · <b>Density at 20 °C:</b>   | 1,177 g/cm <sup>3</sup>                       |                                      |                 |   |                 |                           |                                  |
| · <b>Relative density:</b>   | Not determined.                               |                                      |                 |   |                 |                           |                                  |
| · <b>Vapour density :</b>  | Not determined.                               |                                      |                 |   |                 |                           |                                  |
| · <b>Evaporation rate:</b>   | Not determined.                               |                                      |                 |   |                 |                           |                                  |
| · <b>Solubility in/miscibility with water:</b>   | Not miscible or difficult to mix.             |                                      |                 |   |                 |                           |                                  |
| · <b>Partition coefficient: n-octanol/water:</b>   | Not determined.                               |                                      |                 |   |                 |                           |                                  |
| <ul style="list-style-type: none"> <li>· <b>Viscosity:</b> <table style="width: 100%; border: none;"> <tr> <td style="padding-left: 20px;"><b>Dynamic at 20 °C:</b></td> <td>60 mPa.s</td> </tr> <tr> <td style="padding-left: 20px;"><b>Kinematic:</b></td> <td>Not determined.</td> </tr> </table> </li> </ul>   |   | <b>Dynamic at 20 °C:</b>             | 60 mPa.s        | <b>Kinematic:</b>                               | Not determined. |                           |                                  |
| <b>Dynamic at 20 °C:</b>   | 60 mPa.s                                      |                                      |                 |   |                 |                           |                                  |
| <b>Kinematic:</b>  | Not determined.                               |                                      |                 |   |                 |                           |                                  |
| <ul style="list-style-type: none"> <li>· <b>Solvent content:</b> <table style="width: 100%; border: none;"> <tr> <td style="padding-left: 20px;"><b>Organic solvent:</b></td> <td>0,0 %</td> </tr> <tr> <td style="padding-left: 20px;"><b>VOC (EC):</b></td> <td>0,00 %</td> </tr> <tr> <td style="padding-left: 20px;"><b>Other information:</b></td> <td>No further relevant information.</td> </tr> </table> </li> </ul>   |   | <b>Organic solvent:</b>              | 0,0 %           | <b>VOC (EC):</b>                                | 0,00 %          | <b>Other information:</b> | No further relevant information. |
| <b>Organic solvent:</b>  | 0,0 %   |                                      |                 |   |                 |                           |                                  |
| <b>VOC (EC):</b>   | 0,00 %  |                                      |                 |   |                 |                           |                                  |
| <b>Other information:</b>  | No further relevant information.              |                                      |                 |   |                 |                           |                                  |

**10. Stability and reactivity**

- **Reactivity:** No further relevant information available.
- **Chemical stability:**
- **Thermal decomposition/conditions to be avoided:** No decomposition if used according to specification.
- **Possibility of hazardous reactions:** No dangerous reactions known.
- **Conditions to avoid:** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition product known.

## 11. Toxicological information

- **Information on toxicological effects**
- **Acute toxicity** : Harmfull if swallowed

| <b>LD/LC50 values relevant for classification:</b>   |      |   |
|--|------|---|
| <b>9016-87-9 diphenylmethanediisocyanate, isomers and homologues</b>   |      |   |
| Oral   | LD50 | 1,311 mg/kg (rat)                           |
| Dermal   | LD50 | >9,400 mg/kg (Rabbit)                       |
| <b>53862-89-8 Isocyanic acid, polymethylenepolyphenylene ester, polymer with .alpha. – hydro-. Omega. – hydroxypolyoxy (methyl-1,2-ethanediyl)</b> |      |   |
| Oral   | LD50 | > 10,000 mg/kg (Rat)                        |
| Dermal   | LD50 | >9,400 mg/kg (Rat)                          |
| <b>101-68-8 4,4'-methylenediphenyl diisocyanate</b>  |      |   |
| Oral   | LD50 | 2,200 mg/kg (mouse)<br>> 10,000 mg/kg (rat) |
| Dermal   | LD50 | >9,400 mg/kg (Rabbit)                       |
| <b>Reaction mass of 4,4'-methylenediphenyldiisocyanate and o-(p-isocyanatobenzyl)phenylisocyanate</b>  |      |   |
| Oral   | LD50 | >10,000 mg/kg (Rat)                         |
| Dermal   | LD50 | >9,400 mg/kg (Rabbit)                       |

- **Primary irritant effect:**
- **Skin corrosion/irritation :**  
Causes skin irritation.
- **Serious eye damage/irritation:**  
Causes serious eye irritation.
- **Respiratory or skin sensitization:**  
May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.
- **CMR effect (carcinogenity, mutagenicity and toxicity for reproductions):**
- **Germ cell mutagenicity:** based on available data, the classification criteria are not met.
- **Carcinogenicity:** suspected of causing cancer.
- **Reproductivity toxicity:** based on available data, the classification criteria are not met.
- **STOT-single exposure:** May cause respiratory irritation.
- **STOT-repeated exposure:** May cause damage to organs through prolonged or repeated exposure.
- **Aspiration hazard:** based on available data, the classification criteria are not met.

## 12. Ecological information

### Toxicity

| Aquatic toxicity  |                         |
|---|-------------------------|
| <b>9016-87-9 Diphenylmethanediisocyanate, isomers and homologues</b>  |                         |
| LC50/96 h   | >1,000 mg/l (zebrafish) |
| EC50/24 h   | >1,000 mg/l (daphnia)   |
| EC50/96 h   | >1,000 mg/l (fish)      |
| EC50/72 h   | >1,640 mg/l (alga)      |
| <b>53862-89-8 Isocyanic acid, polymethylenepolyphenyleneester, polymer with.alpha. – hydro. – omega. – hydroxypolyoxy (methyl-1,2-ethanediyl)</b> |                         |
| LC50/96 h (static)  | >1,000 mg/l (zebrafish) |
| LC50/24 h (static)  | >1,000 mg/l (daphnia)   |
| <b>101-68-8 4,4'-methylenediphenyl diisocyanate</b>   |                         |
| LC50/96 h   | >1,000 mg/l (fish)      |
| EC50/24 h   | >1,000 mg/l (daphnia)   |
| <b>Reaction mass of 4,4'-methylenediisocyanate and o-(p-isocyanatobenzyl)phenyldiisocyanate</b>   |                         |
| LC50/96 h   | >1,000 mg/l (fish)      |
| EC50/24 h   | >1,000 mg/l (daphnia)   |

- **Persistence and degradability:** No further relevant information available.
- **Behaviour in environmental systems:** No further relevant information available.
- **Bioaccumulative potential:** No further relevant information available.
- **Mobility in soil:** No further relevant information available.
- **Ecotoxic effects:** No further relevant information available.
- **Additional ecological information:** No further relevant information available.
- **General notes:** Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.  
Do not allow undiluted product or large quantities of it to reach ground water, water source or sewage system.
- **Results of PBT and vPvB assessments:**  
**PBT:** not applicable.  
**vPvB:** not applicable.  
**Other adverse effects:** No further relevant information available.

## 13. Disposal consideration

- **Waste treatment methods**
- **Recommendation :**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleaning agents:** water, if necessary together with cleansing agent.



**14. Transport information**

|  |                |
|--|----------------|
| · <b>UN-number</b><br>· <b>ADR, IMDG, IATA</b>   | Not regulated  |
| · <b>UN proper shipping name</b><br>· <b>ADR, IMDG, IATA</b>                           | Not regulated  |
| · <b>Transport hazard class(es)</b><br>· <b>ADR, AND, IMDG, IATA</b><br>· <b>Class</b> | Not regulated  |
| · <b>Packing group</b><br>· <b>ADR; IMDG, IATA</b>                                     | Not regulated  |
| · <b>Environmental hazards :</b>   | Not regulated  |
| · <b>Special precautions for user</b>  | Not applicable |
| · <b>Transport additional information :</b>  | Not applicable |
| · <b>UN « Model regulation » :</b>   | Not regulated  |

**15. Regulatory information**

**Safety, health and environmental regulations: legislation specific for the product.**

**Directive 2012/18/EU**

**Named dangerous substances – ANNEX 1:** None of the ingredients is listed.

**REGULATION (EC) No 1907/2006 ANNEX XVII:** Conditions of restriction: 3

**DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**

None of the ingredients is listed.

**Chemical safety assessment:** A chemical Safety Assessment has not been carried out.

**16. Additional information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**Relevant phrases referred to under sections 2 and 3:**

H302 Harmful if swallowed.

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.

H351 Suspected of causing cancer.

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

**Abbreviations and acronyms:**

ADR: European agreement concerning the International Carriage of Dangerous Goods by road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and labelling of chemicals.

EINECS: European Inventory of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC : Volatile Organic Compounds (USA, EU)

LC50 : Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxicity – inhalation – Category 4.

Skin Irrit. 2: Skin corrosion/irritation – Category 2.

Eye Irrit. 2 : Serious eye damage/eye irritation – Category 2.

Resp. Sens. 1: Respiratory sensitisation – Category 1.

Resp. Sens. 1B : Respiratory sensitisation – Category 1B.

Skin Sens. 1: Skin sensitisation – Category 1.

Skin Sens. 1B : Skin sensitisation – Category 1B.

Carc. 2 : Carcinogenicity – Category 2.

STOT SE3 : Specific target organ toxicity (single exposure) – Category 3.

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2.

**Data compared to the previous version altered.**

**1. Identification of the substance/mixture and of the company/undertaking****Product identifier**

Product name: **TEKINJECT PU 1C CAT**  
Type of product : Mixture

**Relevant identified uses of the substance or mixture and uses advised against**  
Identified uses: Only for professional use.**Details of the supplier of the safety data sheet**

Company: TEKINJECT BV  
Kruisblok 6  
BE - 2320 HOOGSTRATEN  
E-mail address: [info@tekinject.com](mailto:info@tekinject.com)

**Emergency telephone number**

24-hours emergency number: +32 494 239 441

National poison information service: This is a generic EU Safety Data Sheet. Consult your Specific member state version for this information.

**2. Hazard Identification****Classification according to Regulation (EC) No 1272/2008**

GHS07

Eye Irrit. 2      H319 Causes serious eye irritation.

**Label elements****Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

**Hazard pictograms**

GHS 07


**Signal word:** Danger**Hazard statements:**

H319 Causes serious eye irritation.

- **Precautionary statements:**  
 P280 Wear protection gloves/eye protection/face protection  
 P305+P351+P338 IF IN EYES: rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P303+P361+P353 IF ON SKIN immediately take off all contaminated clothing. Rinse skin with water.
- **Additional information:**
- **Other hazards**
- **Results of PBT and vPvB assessment:**
- **PBT:** Not applicable
- **vPvB:** Not applicable

**3. Composition/information on ingredients**

- **Description:** mixture of substances with nonhazardous additions.

| Dangerous components : |                         |  |           |
|------------------------|-------------------------|--|-----------|
| CAS 6425-39-4          | 2,2'-dimorpholinylether | <br>eye Irrit. 2, H319 | 20 – 60 % |
| EINECS : 229-194-7     | ether                   |  |           |
| Reg.nr. :              |                         |  |           |
| 012119969278-20 xxxx   |                         |  |           |

**Additional information:** For the wording of the listed hazard phrases refer to section 16.

**4. First aid measures**

- **Description of first aid measures.**
- **General information:** Symptoms of poisoning may even occur after several hours; therefor medical observation for at least 48 hours after the accident.
- **After inhalation:** Supply fresh air and to be sure call for a doctor. In case of unconsciousness place the patient stable inside position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** If symptoms persist, consult a doctor.

**5. Fire-fighting measures**

- **Extinguishing media.**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **Special hazards arising from the substance or mixture:** no relevant information available.
- **Advise for firefighters:** No relevant information available.
- **Protective equipment:** Mouth respiratory protective device.

**6. Accidental releases measures**

- **Personal precautions, protective equipment and emergency procedures:** Not required.
- **Environmental precautions:** Do not allow to enter sewers/surface or ground water.
- **Methods and material for containment and cleaning up:** Absorb with liquid-binding material (sand, diatomite, acid binder, universal binder, sawdust). Use neutralizing agent. Dispose contaminated material as waste according to section 13. Ensure adequate ventilation.
- **References to other sections**  
 See section 7 for information and safe handling.  
 See section 8 for information on personal protection equipment.  
 See section 13 for disposal information.

**7. Handling and storage**

- **Precautions for safe handling:** ensure good ventilation/exhaustion at the workplace. Prevent formation of aerosols.
- **Information about fire- and explosion protection:** No special measures required.
- **Conditions for safe storage, including any incompatibilities.**
- **Storage:** No special requirements
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **Specific end use(s):** No further relevant information available.

**8. Exposure control/personal protection**

- **Additional information about design of technical facilities:** No further data; see section 7.
- **Control parameters**

| <b>Ingredients with limit values that require monitoring at the workplace:</b> |   |
|--|---|
| <b>6425-29-4 2,2'-dimopholinyl-diethyl ether</b>                               |   |
| Oral   | Long term systemic effects: 0,5 mg/kg (consumer)  |
| Dermal   | Long-term systemic effects: 0,5 mg/kg (consumer)<br>1 mg/kg (worker)                            |
| Inhalative   | Long-term systemic effects: 1,8 mg/m <sup>3</sup> (consumer)<br>7,28 mg/m <sup>3</sup> (Worker) |

- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **Personal protective equipment.**
- **General protective and hygienic measures:**  
Keep away from foodstuffs, beverages, and feed.  
Wash hands before break and at the end of the work.  
Avoid contact with eyes and skin.
- **Respiratory protection:**  
In case of brief exposure or low pollution, use respiratory filter device. In case of intensive or longer exposure, use self-contained respiratory protection device.
- **Protection of hands:**



Protective gloves

The glove material must be impermeable and resistant to the product/the substances/the preparation. Due to missing tests no recommendation to the glove material can be given. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

- **Material of gloves:**  
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material:**  
The exact break through time must be found out by the manufacturer of the protective gloves and must be observed.
- **Eye protection:**



Tightly sealed goggles.

**9. Physical and technical properties**

|  |                                  |                                      |                 |   |              |               |                 |               |                 |                          |          |                   |                 |                         |   |                  |       |                           |                                  |
|--|----------------------------------|--------------------------------------|-----------------|---|--------------|---------------|-----------------|---------------|-----------------|--------------------------|----------|-------------------|-----------------|-------------------------|---|------------------|-------|---------------------------|----------------------------------|
| <ul style="list-style-type: none"> <li>· <b>Information on basic physical and chemical properties</b></li> <li>· <b>General information</b></li> <li>· <b>Appearance:</b> <table style="width: 100%; border: none;"> <tr> <td style="padding-left: 20px;"><b>Form</b></td> <td>Liquid</td> </tr> <tr> <td style="padding-left: 20px;"><b>Colour</b></td> <td>Light yellow</td> </tr> <tr> <td style="padding-left: 20px;"><b>Odour</b></td> <td>Amine-like</td> </tr> </table> </li> </ul>   |                                  | <b>Form</b>                          | Liquid          | <b>Colour</b>                                   | Light yellow | <b>Odour</b>  | Amine-like      |               |                 |                          |          |                   |                 |                         |   |                  |       |                           |                                  |
| <b>Form</b>  | Liquid                           |                                      |                 |   |              |               |                 |               |                 |                          |          |                   |                 |                         |   |                  |       |                           |                                  |
| <b>Colour</b>  | Light yellow                     |                                      |                 |   |              |               |                 |               |                 |                          |          |                   |                 |                         |   |                  |       |                           |                                  |
| <b>Odour</b>   | Amine-like                       |                                      |                 |   |              |               |                 |               |                 |                          |          |                   |                 |                         |   |                  |       |                           |                                  |
| · <b>pH-value:</b>   | Not determined.                  |                                      |                 |   |              |               |                 |               |                 |                          |          |                   |                 |                         |   |                  |       |                           |                                  |
| <ul style="list-style-type: none"> <li>· <b>Change in condition</b> <table style="width: 100%; border: none;"> <tr> <td style="padding-left: 20px;"><b>Melting point/freezing point:</b></td> <td>Not determined.</td> </tr> <tr> <td style="padding-left: 20px;"><b>Initial boiling point and boiling range:</b></td> <td>321 °C</td> </tr> </table> </li> <li>· <b>Ignition temperature</b></li> <li>· <b>Flash point:</b></li> <li>· <b>Flammability (solid, gas):</b></li> <li>· <b>Decomposition temperature:</b></li> <li>· <b>Auto-ignition temperature:</b></li> <li>· <b>Explosive properties:</b></li> <li>· <b>Explosion limits :</b> <table style="width: 100%; border: none;"> <tr> <td style="padding-left: 20px;"><b>Lower:</b></td> <td>Not determined.</td> </tr> <tr> <td style="padding-left: 20px;"><b>Upper:</b></td> <td>Not determined.</td> </tr> </table> </li> <li>· <b>Vapour pressure at 20 °C:</b></li> <li>· <b>Density at 20 °C:</b></li> <li>· <b>Relative density:</b></li> <li>· <b>Vapour density :</b></li> <li>· <b>Evaporation rate:</b></li> <li>· <b>Solubility in/miscibility with water:</b></li> <li>· <b>Partition coefficient: n-octanol/water:</b></li> <li>· <b>Viscosity:</b> <table style="width: 100%; border: none;"> <tr> <td style="padding-left: 20px;"><b>Dynamic at 20 °C:</b></td> <td>35 mPa.s</td> </tr> <tr> <td style="padding-left: 20px;"><b>Kinematic:</b></td> <td>Not determined.</td> </tr> </table> </li> <li>· <b>Solvent content:</b> <table style="width: 100%; border: none;"> <tr> <td style="padding-left: 20px;"><b>Organic solvent:</b></td> <td>-</td> </tr> <tr> <td style="padding-left: 20px;"><b>VOC (EC):</b></td> <td>0,0 %</td> </tr> <tr> <td style="padding-left: 20px;"><b>Other information:</b></td> <td>No further relevant information.</td> </tr> </table> </li> </ul> |                                  | <b>Melting point/freezing point:</b> | Not determined. | <b>Initial boiling point and boiling range:</b> | 321 °C       | <b>Lower:</b> | Not determined. | <b>Upper:</b> | Not determined. | <b>Dynamic at 20 °C:</b> | 35 mPa.s | <b>Kinematic:</b> | Not determined. | <b>Organic solvent:</b> | - | <b>VOC (EC):</b> | 0,0 % | <b>Other information:</b> | No further relevant information. |
| <b>Melting point/freezing point:</b>   | Not determined.                  |                                      |                 |   |              |               |                 |               |                 |                          |          |                   |                 |                         |   |                  |       |                           |                                  |
| <b>Initial boiling point and boiling range:</b>  | 321 °C                           |                                      |                 |   |              |               |                 |               |                 |                          |          |                   |                 |                         |   |                  |       |                           |                                  |
| <b>Lower:</b>  | Not determined.                  |                                      |                 |   |              |               |                 |               |                 |                          |          |                   |                 |                         |   |                  |       |                           |                                  |
| <b>Upper:</b>  | Not determined.                  |                                      |                 |   |              |               |                 |               |                 |                          |          |                   |                 |                         |   |                  |       |                           |                                  |
| <b>Dynamic at 20 °C:</b>   | 35 mPa.s                         |                                      |                 |   |              |               |                 |               |                 |                          |          |                   |                 |                         |   |                  |       |                           |                                  |
| <b>Kinematic:</b>  | Not determined.                  |                                      |                 |   |              |               |                 |               |                 |                          |          |                   |                 |                         |   |                  |       |                           |                                  |
| <b>Organic solvent:</b>  | -                                |                                      |                 |   |              |               |                 |               |                 |                          |          |                   |                 |                         |   |                  |       |                           |                                  |
| <b>VOC (EC):</b>   | 0,0 %                            |                                      |                 |   |              |               |                 |               |                 |                          |          |                   |                 |                         |   |                  |       |                           |                                  |
| <b>Other information:</b>  | No further relevant information. |                                      |                 |   |              |               |                 |               |                 |                          |          |                   |                 |                         |   |                  |       |                           |                                  |

**10. Stability and reactivity**

- **Reactivity:** No further relevant information available.
- **Chemical stability:**
- **Thermal decomposition/conditions to be avoided:** No decomposition if used according to specification.
- **Possibility of hazardous reactions:** No dangerous reactions known.
- **Conditions to avoid:** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition product known.

**11. Toxicological information**

- **Information on toxicological effects**
- **Acute toxicity :** Harmfull if swallowed

|  |      |                     |
|--|------|---------------------|
| <b>LD/LC50 values relevant for classification:</b> |      |                     |
| <b>6425-39-4 2,2'-dimorpholinyl-diethyl ether</b>  |      |                     |
| Oral   | LD50 | 2025 mg/kg (Rat)    |
| Dermal   | LD50 | 3038 mg/kg (Rabbit) |

- **Primary irritant effect:**
- **Skin corrosion/irritation :**  
Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation:**  
Causes serious eye irritation.
- **Respiratory or skin sensitization:**  
Based on available data, the classification criteria are not met.
- **CMR effect (carcinogenity, mutagenicity and toxicity for reproductions):**
- **Germ cell mutagenicity:** based on available data, the classification criteria are not met.
- **Carcinogenicity:** suspected of causing cancer.
- **Reproductivity toxicity:** based on available data, the classification criteria are not met.
- **STOT-single exposure:** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure:** Based on available data, the classification criteria are not met.
- **Aspiration hazard:** based on available data, the classification criteria are not met.

**12. Ecological information**

- **Toxicity**

|   |                              |
|---|------------------------------|
| <b>Aquatic toxicity</b>                           |                              |
| <b>6425-39-4 2,2'-dimorpholinyl-diethyl ether</b> |                              |
| EC50/48 h   | >100 mg/l (daphnia)          |
| EC50/96 h   | >100 mg/l (algae)            |
| LC50/96 h   | >2159 mg/l (freshwater fish) |

- **Persistence and degradability:** No further relevant information available.
- **Behaviour in environmental systems:** No further relevant information available.
- **Bioaccumulative potential:** No further relevant information available.
- **Mobility in soil:** No further relevant information available.
- **Ecotoxicological effects:** No further relevant information available.
- **Additional ecological information:** No further relevant information available.
- **General notes:** Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.  
Do not allow undiluted product or large quantities of it to reach ground water, water source or sewage system.
- **Results of PBT and vPvB assessments:**  
**PBT:** not applicable.  
**vPvB:** not applicable.
- **Other adverse effects:** No further relevant information available.

**13. Disposal consideration**

- **Waste treatment methods**
- **Recommendation :**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleaning agents:** water, if necessary together with cleansing agent.

**14. Transport information**

|   |                |
|---|----------------|
| · <b>UN-number</b>                          |                |
| · <b>ADR, IMDG, IATA</b>                    | Not regulated  |
| · <b>UN proper shipping name</b>            |                |
| · <b>ADR, IMDG, IATA</b>                    | Not regulated  |
| · <b>Transport hazard class(es)</b>         |                |
| · <b>ADR, AND, IMDG, IATA</b>               | Not regulated  |
| · <b>Class</b>                              |                |
| · <b>Packing group</b>                      |                |
| · <b>ADR; IMDG, IATA</b>                    | Not regulated  |
| · <b>Environmental hazards :</b>            | Not regulated  |
| · <b>Special precautions for user</b>       | Not applicable |
| · <b>Transport additional information :</b> | Not applicable |
| · <b>UN « Model regulation » :</b>          | Not regulated  |

**15. Regulatory information**

**Safety, health and environmental regulations: legislation specific for the product.**

**Directive 2012/18/EU**

**Named dangerous substances – ANNEX 1:** None of the ingredients is listed.

**REGULATION (EC) No 1907/2006 ANNEX XVII:** Conditions of restriction: 3

**DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**

None of the ingredients is listed.

**Chemical safety assessment:** A chemical Safety Assessment has not been carried out.



**16. Additional information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**Relevant phrases referred to under sections 2 and 3:**

H319 Causes serious eye irritation.

**Abbreviations and acronyms:**

ADR: European agreement concerning the International Carriage of Dangerous Goods by road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and labelling of chemicals.

EINECS: European Inventory of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC : Volatile Organic Compounds (USA, EU)

LC50 : Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxicity – inhalation – Category 4.

Skin Irrit. 2: Skin corrosion/irritation – Category 2.

Eye Irrit. 2 : Serious eye damage/eye irritation – Category 2.

Resp. Sens. 1: Respiratory sensitisation – Category 1.

Resp. Sens. 1B : Respiratory sensitisation – Category 1B.

Skin Sens. 1: Skin sensitisation – Category 1.

Skin Sens. 1B : Skin sensitisation – Category 1B.

Carc. 2 : Carcinogenicity – Category 2.

STOT SE3 : Specific target organ toxicity (single exposure) – Category 3.

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2.

**Data compared to the previous version altered.**