

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 17.12.2018

Version number 1

Revision: 30.05.2018

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

- **1.1 Product identifier**
- **Trade name:** TAFIGEL® PUR 44
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture** Rheology modifier
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
MÜNZING CHEMIE GmbH  
Münzingstrasse 2  
74232 Abstatt, Germany  
E-Mail: info@munzing.com  
Tel.: +49 7131 987-100
- **Further information obtainable from:**  
Product Safety Department  
E-mail (MSDS): msds@munzing.com
- **1.4 Emergency telephone number:** For Chemical Emergencies: CHEMTREC: +1 703 741 5970

**SECTION 2: Hazards identification**

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**  
The product is not classified, according to the CLP regulation.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void
- **Additional information:**  
Safety data sheet available on request.
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** None.
- **vPvB:** None.

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

- **3.2 Chemical characterisation: Mixtures**
- **Description:** Polyurethane dispersion

· **Dangerous components:**

|                           |                                     |                  |        |
|---------------------------|-------------------------------------|------------------|--------|
| CAS: 143-22-6             | 2-[2-(2-Butoxyethoxy)ethoxy]ethanol | Eye Dam. 1, H318 | 10-20% |
| EINECS: 205-592-6         |                                     |                  |        |
| Reg.nr.: 01-2119531322-53 |                                     |                  |        |

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

**SECTION 4: First aid measures**

- **4.1 Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water.

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- **After swallowing:** If symptoms persist consult doctor.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### **SECTION 5: Firefighting measures**

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.  
Use fire extinguishing methods suitable to surrounding conditions.
- **5.2 Special hazards arising from the substance or mixture**  
In case of fire, the following can be released:  
Nitrogen oxides (NO<sub>x</sub>)  
Carbon monoxide (CO)
- **5.3 Advice for firefighters**
- **Protective equipment:** Do not inhale explosion gases or combustion gases.
- **Additional information**  
Product contains water and is non-combustible.  
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

### **SECTION 6: Accidental release measures**

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Wear protective clothing.  
Particular danger of slipping on leaked/spilled product.
- **6.2 Environmental precautions:**  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **6.4 Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### **SECTION 7: Handling and storage**

- **7.1 Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:** Protect from heat.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Store in cool, dry conditions in well sealed receptacles.
- **7.3 Specific end use(s)** No further relevant information available.

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

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

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· **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

· **DNELs**

**CAS: 143-22-6 2-[2-(2-Butoxyethoxy)ethoxy]ethanol**

|            |  |                               |
|------------|--|-------------------------------|
| Oral       | consumer, long-term exposure, systemic effects | 2.5 mg/kg bw/day (human)      |
| Dermal     | worker, long-term exposure, systemic effects   | 50 mg/kg bw/day (human)       |
|            | consumer, long-term exposure, systemic effects | 25 mg/kg bw/day (human)       |
| Inhalative | worker, long-term exposure, systemic effects   | 195 mg/m <sup>3</sup> (human) |
|            | consumer, long-term exposure, systemic effects | 117 mg/m <sup>3</sup> (human) |

· **PNECs**

**CAS: 143-22-6 2-[2-(2-Butoxyethoxy)ethoxy]ethanol**

|                             |                            |
|-----------------------------|----------------------------|
| fresh water                 | 1.5 mg/l (not specified)   |
| marine water                | 0.15 mg/l (not specified)  |
| aqua - intermittent release | 5 mg/l (not specified)     |
| soil                        | 0.45 mg/kg (not specified) |
| sediment (fresh water)      | 0.13 mg/kg (not specified) |
| sewage treatment plant      | 200 mg/l (not specified)   |

· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

Avoid contact with the eyes and skin.

· **Respiratory protection:** Use suitable respiratory protective device only when aerosol or mist is formed.

· **Protection of hands:**

Only use chemical-protective gloves with CE-labelling of category III.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

Nitrile rubber, NBR

Fluorocarbon rubber (Viton)

Recommended thickness of the material:  $\geq 0.4$  mm

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 can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

For the mixture of chemicals mentioned below the penetration time has to be at least 480 minutes (Permeation according to EN 374 Part 3: Level 6).

The determined penetration times according to EN 374 part III are not performed under practical conditions.

Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.

· **Eye protection:** Safety glasses

· **Body protection:** Protective work clothing

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**SECTION 9: Physical and chemical properties**

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

· **General Information**

· **Appearance:**

|                           |                 |
|---------------------------|-----------------|
| · <b>Form:</b>            | Fluid           |
| · <b>Colour:</b>          | Grey            |
| · <b>Odour:</b>           | Characteristic  |
| · <b>Odour threshold:</b> | Not determined. |

· **pH-value (20 g/l) at 20 °C:** ≈ 7 (DIN ISO 976)

· **Change in condition**

|   |               |
|---|---------------|
| · <b>Melting point/freezing point:</b>            | Undetermined. |
| · <b>Initial boiling point and boiling range:</b> | ≈ 100 °C      |

· **Flash point:** > 100 °C (DIN EN ISO 2719)

· **Flammability (solid, gas):** Not applicable.

· **Ignition temperature:** Not determined.

· **Decomposition temperature:** Not determined.

· **Auto-ignition temperature:** Product is not selfigniting.

· **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· **Explosion limits:**

|                 |                 |
|-----------------|-----------------|
| · <b>Lower:</b> | Not determined. |
| · <b>Upper:</b> | Not determined. |

· **Oxidising properties:** None.

· **Vapour pressure:** Not determined.

· **Density at 20 °C:** ≈ 1.07 g/cm<sup>3</sup> (DIN EN ISO 2811-1)

· **Relative density:** Not determined.

· **Vapour density:** Not determined.

· **Evaporation rate:** Not determined.

· **Solubility in / Miscibility with water:**

Partly miscible.

· **Partition coefficient: n-octanol/water:** Not determined.

· **Viscosity:**

· **Dynamic at 20 °C:** ≈ 21000 mPas (DIN EN ISO 3219)

· **Solvent content:**

· **Water:** ≈ 40 %

· **9.2 Other information:** No further relevant information available.

**SECTION 10: Stability and reactivity**

· **10.1 Reactivity:** No further relevant information available.

· **10.2 Chemical stability**

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

· **10.3 Possibility of hazardous reactions:** No dangerous reactions known.

· **10.4 Conditions to avoid:** No further relevant information available.

· **10.5 Incompatible materials:** No further relevant information available.

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· **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

**SECTION 11: Toxicological information**

· **11.1 Information on toxicological effects**

· **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values relevant for classification:**

**CAS: 143-22-6 2-[2-(2-Butoxyethoxy)ethoxy]ethanol**

|        |      |                      |
|--------|------|----------------------|
| Oral   | LD50 | >5,170 mg/kg (rat)   |
| Dermal | LD50 | 3,540 mg/kg (rabbit) |

· **Primary irritant effect:**

· **Skin corrosion/irritation** Based on available data, the classification criteria are not met.

· **Serious eye damage/irritation** Based on available data, the classification criteria are not met.

· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

· **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.

· **Carcinogenicity** Based on available data, the classification criteria are not met.

· **Reproductive 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.

**SECTION 12: Ecological information**

· **12.1 Toxicity**

· **Aquatic toxicity:**

**CAS: 143-22-6 2-[2-(2-Butoxyethoxy)ethoxy]ethanol**

|               |  |
|---------------|--|
| EC50 (static) | >500 mg/l (daphnia) (Daphnia magna / 48 h)                     |
| EC10 (static) | 612.6 mg/l (alga) (Desmodesmus subspicatus / 72 h)             |
|               | >1,995 mg/l (bacteria) (Activated sludge / 30 min. (OECD 209)) |
| LC50 (static) | 2,200-4,600 mg/l (fish) (Leuciscus idus / 96 h)                |

· **12.2 Persistence and degradability** No further relevant information available.

· **12.3 Bioaccumulative potential** No further relevant information available.

· **12.4 Mobility in soil** No further relevant information available.

· **Ecotoxicological effects:**

· **Behaviour in sewage processing plants:**

Inhibition of degradation activity in activated sludge is not to be anticipated during correct introduction of low concentrations. Do not release untreated into natural waters.

· **Additional ecological information:**

· **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 course or sewage system.

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

According to Annex XIV of Regulation (EC) No.1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH): The product does not contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria. Self classification.

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· **12.6 Other adverse effects** No further relevant information available.

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**SECTION 13: Disposal considerations**

· **13.1 Waste treatment methods**

· **Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **European waste catalogue**

|          |                                |
|----------|--------------------------------|
| 07 02 99 | wastes not otherwise specified |
|----------|--------------------------------|

· **Uncleaned packaging:**

· **Recommendation:** Disposal must be made according to official regulations.

· **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

**SECTION 14: Transport information**

· **14.1 UN-Number**

· **ADR/RID/ADN, ADN, IMDG, IATA** Void

· **14.2 UN proper shipping name**

· **ADR/RID/ADN, ADN, IMDG, IATA** Void

· **14.3 Transport hazard class(es)**

· **ADR/RID/ADN, ADN, IMDG, IATA**

· **Class** Void

· **14.4 Packing group**

· **ADR/RID/ADN, IMDG, IATA** Void

· **14.5 Environmental hazards:**

· **Marine pollutant:** No

· **14.6 Special precautions for user**

Not applicable.

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

Not applicable.

· **Transport/Additional information:**

Not a dangerous good to the above specifications.

· **UN "Model Regulation":**

Void

**SECTION 15: Regulatory information**

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

· **Directive 2012/18/EU**

· **Named dangerous substances - ANNEX I** None of the ingredients is listed.

· **National regulations:**

· **Waterhazard class:** Water hazard class 1 (German AwSV, Self-assessment): slightly hazardous for water.

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

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**SECTION 16: Other 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**

H318 Causes serious eye damage.

· **Department issuing SDS:**

Product Safety Department

E-Mail: [msds@munzing.com](mailto:msds@munzing.com)

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (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 Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Eye Dam. 1: Serious eye damage/eye irritation – Category 1