

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

Printing date 17.12.2018

Version number 1

Revision: 23.09.2015

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

- **1.1 Product identifier**
- **Trade name:** EDAPLAN® 472
- **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** Wetting & dispersing agents
- **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**  
Eye Irrit. 2 H319 Causes serious eye irritation.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**  
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS07

- **Signal word** Warning
- **Hazard statements**  
H319 Causes serious eye irritation.
- **Precautionary statements**  
P264 Wash thoroughly after handling.  
P280 Wear 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.  
P337+P313 If eye irritation persists: Get medical advice/attention.
- **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:** acrylic copolymer in butyldiglycol

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**· Dangerous components:**

CAS: 112-34-5	2-(2-butoxyethoxy)ethanol	Eye Irrit. 2, H319	20-50%
EINECS: 203-961-6			
Reg.nr.: 01-2119475104-44			

**· 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:**

Take affected persons into fresh air and keep quiet.

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

In case of unconsciousness place patient stably in side 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 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.

**· For safety reasons unsuitable extinguishing agents:** Water with full jet

**· 5.2 Special hazards arising from the substance or mixture** No further relevant information available.

**· 5.3 Advice for firefighters**

**· Protective equipment:** Do not inhale explosion gases or combustion gases.

**· Additional information**

Cool endangered receptacles with water spray.

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**

Ensure adequate ventilation

Keep away from ignition sources.

Wear protective clothing.

**· 6.2 Environmental precautions:**

Do not allow to penetrate the ground/soil.

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).

Ensure adequate ventilation.

**· 6.4 Reference to other sections**

See Section 7 for information on safe handling.

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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**

Store in cool, dry place in tightly closed receptacles.  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.

**· Information about fire - and explosion protection:**

Keep ignition sources away - Do not smoke.  
Protect from heat.  
Protect against electrostatic charges.

**· 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:** Store away from oxidising agents.
- **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.

**· 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: 112-34-5 2-(2-butoxyethoxy)ethanol**

Oral	consumer, long-term exposure, systemic effects	1.25 mg/kg bw/day (human)
Dermal	worker, long-term exposure, systemic effects	20 mg/kg bw/day (human)
	consumer, long-term exposure, systemic effects	10 mg/kg bw/day (human)
Inhalative	worker, long-term exposure, systemic effects	67.5 mg/m <sup>3</sup> (human)
	consumer, long-term exposure, systemic effects	34 mg/m <sup>3</sup> (human)
	consumer, short-term exposure, local effects	50.6 mg/m <sup>3</sup> (human)

**· PNECs**

**CAS: 112-34-5 2-(2-butoxyethoxy)ethanol**

fresh water	1 mg/l (not specified)
marine water	0.1 mg/l (not specified)
aqua - intermittent release	3.9 mg/l (not specified)
soil	0.4 mg/kg (not specified)
sediment (fresh water)	4 mg/kg (not specified)
sediment (marine water)	0.4 mg/kg (not specified)
sewage treatment plant	200 mg/l (not specified)

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

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- **8.2 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 breaks and at the end of work.  
Avoid contact with the 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 protective device.
- **Protection of hands:**  
Protective gloves  
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**  
Butyl rubber, BR  
Recommended thickness of the material:  $\geq 0.5$  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:** Tightly sealed goggles
- **Body protection:** Protective work clothing

**SECTION 9: Physical and chemical properties**

- **9.1 Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

Form:	Fluid
Colour:	Dark red
Odour:	Characteristic
Odour threshold:	Not determined.
- **pH-value (20 g/l) at 20 °C:**  $\approx 4.5$  (DIN ISO 976)
- **Change in condition**

Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	$> 100$ °C
- **Flash point:**  $\approx 71$  °C (DIN EN ISO 2719)
- **Flammability (solid, gas):** Not applicable.
- **Ignition temperature:**  $\approx 210$  °C (2-(2-Butoxyethoxy)ethanol)
- **Decomposition temperature:** Not determined.

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· <b>Auto-ignition temperature:</b>	Product is not selfigniting.
· <b>Explosive properties:</b>	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· <b>Explosion limits:</b> Lower:	≈ 0.7 Vol % (2-(2-Butoxyethoxy)ethanol)
Upper:	≈ 5.3 Vol % (2-(2-Butoxyethoxy)ethanol)
· <b>Oxidising properties</b>	None.
· <b>Vapour pressure:</b>	Not determined.
· <b>Density at 20 °C:</b>	≈ 1.04 g/cm <sup>3</sup> (DIN EN ISO 2811-1)
· <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.
· <b>Viscosity:</b> Dynamic at 20 °C:	≈ 4000 mPas (DIN EN ISO 3219)
· <b>Solvent separation test:</b>	Not determined
· <b>Solvent content:</b>	
Solids content:	≈ 50 %
· <b>9.2 Other information</b>	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.
- **10.6 Hazardous decomposition products:** Carbon monoxide and carbon dioxide

### 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: 112-34-5 2-(2-butoxyethoxy)ethanol**

Oral	LD50	3,384 mg/kg (rat)
Dermal	LD50	2,764 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 sensitisation** Based on available data, the classification criteria are not met.

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- **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: 112-34-5 2-(2-butoxyethoxy)ethanol**

EC50	>100 mg/l (alga) ( <i>Scenedesmus subspicatus</i> / 96 h (OECD 201))
	>100 mg/l (daphnia) ( <i>Daphnia magna</i> / 48 h)
EC10	>1,995 mg/l (bacteria) (activated sludge / 30 min.)
LC50 (static)	1,300 mg/l (fish) ( <i>Lepomis macrochirus</i> / 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.
- **12.6 Other adverse effects** No further relevant information available.

**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.

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**SECTION 14: Transport information**

· <b>14.1 UN-Number</b> · <b>ADR/RID/ADN, ADN, IMDG, IATA</b>	Void
· <b>14.2 UN proper shipping name</b> · <b>ADR/RID/ADN, ADN, IMDG, IATA</b>	Void
· <b>14.3 Transport hazard class(es)</b> · <b>ADR/RID/ADN, ADN, IMDG, IATA</b> · <b>Class</b>	Void
· <b>14.4 Packing group</b> · <b>ADR/RID/ADN, IMDG, IATA</b>	Void
· <b>14.5 Environmental hazards:</b> · <b>Marine pollutant:</b>	No
· <b>14.6 Special precautions for user</b>	Not applicable.
· <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	Not a dangerous good to the above specifications.
· <b>UN "Model Regulation":</b>	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.
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3, 55
- **National regulations:**
- **Information about limitation of use:**  
Employment restrictions concerning juveniles must be observed.  
Employment restrictions concerning pregnant and lactating women must be observed.
- **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.

**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**  
H319 Causes serious eye irritation.
- **Department issuing SDS:**  
Product Safety Department  
E-Mail: 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

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

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