

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

Printing date 23.01.2021

Version number 1

Revision: 14.12.2020

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

- **1.1 Product identifier**
  - Trade name: **EDAPLAN® LA 402**
  - UFI: D861-U0AD-300Q-W0R5
- **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 Additive
- **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](mailto:info@munzing.com)  
Tel.: +49 7131 987-100
- **Further information obtainable from:**

Product Safety Department  
E-mail (MSDS): [msds@munzing.com](mailto: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  
Flam. Liq. 3 H226 Flammable liquid and vapour.  
Acute Tox. 4 H332 Harmful if inhaled.  
Skin Irrit. 2 H315 Causes skin irritation.  
Eye Dam. 1 H318 Causes serious eye damage.
- **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



GHS02 GHS05 GHS07

- **Signal word** Danger
- **Hazard-determining components of labelling:**

Ethylene glycol monobutyl ether  
butan-1-ol
- **Hazard statements**

H226 Flammable liquid and vapour.  
H332 Harmful if inhaled.  
H315 Causes skin irritation.  
H318 Causes serious eye damage.
- **Precautionary statements**

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

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*P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].*

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

*P310 Immediately call a POISON CENTER/doctor.*

*P321 Specific treatment (see on this label).*

*P362+P364 Take off contaminated clothing and wash it before reuse.*

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

· **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:**

Mixture of substances listed below with nonhazardous additions.  
acrylic copolymer

· **Dangerous components:**

CAS: 111-76-2 EINECS: 203-905-0 Reg.nr.: 01-2119475108-36	Ethylene glycol monobutyl ether ----- Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319	20-50%
CAS: 71-36-3 EINECS: 200-751-6 Reg.nr.: 01-2119484630-38	butan-1-ol ----- Flam. Liq. 3, H226; Eye Dam. 1, H318; Acute Tox. 4, H302; Skin Irrit. 2, H315; STOT SE 3, H335-H336	3-<5%

· **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.

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

· **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:** Do not induce vomiting; call for medical help immediately.

· **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.

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### 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** Can form explosive gas-air mixtures.
- **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.  
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**  
Do not allow to penetrate the ground/soil.  
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Do not flush with water or aqueous cleansing agents  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- **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**  
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.

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

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

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

**CAS: 111-76-2 Ethylene glycol monobutyl ether**

IOELV	Short-term value: 246 mg/m <sup>3</sup> , 50 ppm
	Long-term value: 98 mg/m <sup>3</sup> , 20 ppm
	Skin

· **DNELs**

**CAS: 111-76-2 Ethylene glycol monobutyl ether**

Oral	consumer, long-term exposure, systemic effects	6,3 mg/kg bw/day (human)
Dermal	worker, long-term exposure, systemic effects	125 mg/kg bw/day (human)
	consumer, long-term exposure, systemic effects	75 mg/kg bw/day (human)
Inhalative	worker, long-term exposure, systemic effects	98 mg/m <sup>3</sup> (human)
	worker, short-term exposure, local effects	246 mg/m <sup>3</sup> (human)
	consumer, long-term exposure, systemic effects	59 mg/m <sup>3</sup> (human)
	consumer, short-term exposure, local effects	426 mg/m <sup>3</sup> (human)

**CAS: 71-36-3 butan-1-ol**

Oral	worker, long-term exposure, systemic effects	3,125 mg/kg bw/day (human)
Inhalative	worker, short-term exposure, local effects	310 mg/m <sup>3</sup> (human)
	consumer, long-term exposure, systemic effects	55 mg/m <sup>3</sup> (human)

· **PNECs**

**CAS: 111-76-2 Ethylene glycol monobutyl ether**

fresh water	8,8 mg/l (not specified)
marine water	0,88 mg/l (not specified)
aqua - intermittent release	9,1 mg/l (not specified)
soil	2,33 mg/kg (not specified)
sediment (fresh water)	34,6 mg/kg (not specified)
sediment (marine water)	3,46 mg/kg (not specified)
sewage treatment plant	463 mg/l (not specified)

**CAS: 71-36-3 butan-1-ol**

fresh water	0,082 mg/l (not specified)
marine water	0,0082 mg/l (not specified)
aqua - intermittent release	2,25 mg/l (not specified)
soil	0,015 mg/kg (not specified)
sediment (fresh water)	0,178 mg/kg (not specified)
sediment (marine water)	0,0178 mg/kg (not specified)
sewage treatment plant	2476 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:**  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing

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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:  $\geq 0,7$  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 16523-1:2015: Level 6).

The determined penetration times according to EN 16523-1:2015 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: Yellowish

· **Odour:** Characteristic

· **Odour threshold:** Not determined.

· **pH-value (20 g/l) at 20 °C:**  $\approx 4$  (DIN ISO 976)

· **Change in condition**

Melting point/freezing point: Undetermined.

Initial boiling point and boiling range:  $\approx 170$  °C (2-butoxyethanol)

· **Flash point:**  $\approx 50$  °C (DIN EN ISO 2719)

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

· **Ignition temperature:**  $\approx 240$  °C (2-butoxyethanol)

· **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:**

Lower:  $\approx 1,1$  Vol % (2-butoxyethanol)

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Upper:	≈ 10,6 Vol % (2-butoxyethanol)
· Oxidising properties	None.
· Vapour pressure:	Not determined.
· Density at 20 °C:	≈ 0,99 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:	Insoluble.
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
Dynamic at 20 °C:	≈ 200 mPas (DIN EN ISO 3219)
Kinematic:	Not determined.
· Solvent separation test:	Not determined
· 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.
- 10.6 Hazardous decomposition products: No dangerous decomposition products known.

### SECTION 11: Toxicological information

- 11.1 Information on toxicological effects
- Acute toxicity  
Harmful if inhaled.

· LD/LC50 values relevant for classification:

**CAS: 111-76-2 Ethylene glycol monobutyl ether**

Oral	LD50	1300 mg/kg (guinea pig)
Dermal	LD50	>2000 mg/kg (rat)
Inhalative	LC50/4h	10-20 mg/l (rat)

**CAS: 71-36-3 butan-1-ol**

Oral	LD50	790 mg/kg (rat)
Dermal	LD50	3400 mg/kg (rabbit)
Inhalative	LC50/4h	>24 mg/l (rat)

- Primary irritant effect:
- Skin corrosion/irritation  
Causes skin irritation.
- Serious eye damage/irritation  
Causes serious eye damage.
- Respiratory or skin sensitisation Based on available data, the classification criteria are not met.

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- **Additional toxicological information:**
- **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: 111-76-2 Ethylene glycol monobutyl ether**

EC50 (static)	1840 mg/l (alga) ( <i>Pseudokirchneriella subcapitata</i> / 72 h (OECD 201))
	1550 mg/l (daphnia) ( <i>Daphnia magna</i> / 48 h (OECD 202))
LC50 (static)	1474 mg/l (fish) ( <i>Oncorhynchus mykiss</i> / 96 h (OECD 203))
NOEC	100 mg/l (daphnia) ( <i>Daphnia magna</i> / 21 d (OECD 211))
	>100 mg/l (fish) ( <i>Brachydanio rerio</i> (OECD 204))

**CAS: 71-36-3 butan-1-ol**

EC50	225 mg/l (alga) ( <i>Scenedesmus subspicatus</i> / 96 h)
	1328 mg/l (daphnia) ( <i>Daphnia magna</i> / 48 h)
EC10	2476 mg/l (bacteria) ( <i>Pseudomonas putida</i> / 16 h)
LC50	1376 mg/l (fish) ( <i>Pimephales promelas</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.

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· **European waste catalogue**

07 02 04\* other organic solvents, washing liquids and mother liquors

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Diluted caustic solution.

**SECTION 14: Transport information**

· **14.1 UN-Number**

· **ADR/RID/ADN, IMDG, IATA** UN1120

· **14.2 UN proper shipping name**

· **ADR/RID/ADN** 1120 BUTANOLS mixture  
· **IMDG, IATA** BUTANOLS mixture

· **14.3 Transport hazard class(es)**

· **ADR/RID/ADN, IMDG, IATA**



· **Class** 3 Flammable liquids.  
· **Label** 3

· **14.4 Packing group**

· **ADR/RID/ADN, IMDG, IATA** III

· **14.5 Environmental hazards:**

· **Marine pollutant:** No

· **14.6 Special precautions for user**

· **Hazard identification number (Kemler code):** Warning: Flammable liquids. 30  
· **EMS Number:** F-E,S-D  
· **Stowage Category** A

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

Not applicable.

· **Transport/Additional information:**

· **ADR/RID/ADN**

· **Limited quantities (LQ)** 5L  
· **Transport category** 3  
· **Tunnel restriction code** D/E

· **UN "Model Regulation":**

UN 1120 BUTANOLS MIXTURE, 3, III

**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.
- **Seveso category P5c** FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5000 t

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- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50000 t
- **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.

· **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**

H226 Flammable liquid and vapour.

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

H336 May cause drowsiness or dizziness.

· **Department issuing SDS:**

Product Safety Department

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

· **Abbreviations and acronyms:**

ADR: Accord relatif au transport international 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

Flam. Liq. 3: Flammable liquids – Category 3

Acute Tox. 4: Acute toxicity – Category 4

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

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

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

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