1.1 Product identifier

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

No further relevant information available.

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

1.4 Emergency telephone number: For Chemical Emergencies: CHEMTREC: +1 703 741 5970

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008
The product is not classified as hazardous, 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.

3.2 Chemical characterisation: Mixtures

Description: Mixture of substances listed below with nonhazardous additions.

- Dangerous components:
  - CAS: 34590-94-8
  - EINECS: 252-104-2
  - Reg.nr.: 01-2119450011-60
  - Substance: 2-Methoxymethoxyethoxy-propanol
  - Substance with a workplace exposure limit

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

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.
Trade name: LUBA-print® 887/C

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: CO2, 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.

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).
· 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.
Safety data sheet
according to 1907/2006/EC, Article 31

Printing date: 21.01.2020
Revision: 24.06.2019
Version number: 1

Trade name: LUBA-print® 887/C

(Contd. of page 2)

- 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:

<table>
<thead>
<tr>
<th>CAS</th>
<th>WEL</th>
<th>Long-term value: 308 mg/m³, 50 ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>34590-94-8</td>
<td>2-Methoxy-methylethoxy-propanol</td>
<td>Sk</td>
</tr>
</tbody>
</table>

- DNELs

<table>
<thead>
<tr>
<th>CAS</th>
<th>Oral worker, long-term exposure, systemic effects</th>
<th>1.67 mg/kg bw/day (human)</th>
</tr>
</thead>
<tbody>
<tr>
<td>34590-94-8</td>
<td>Consumer, long-term exposure, systemic effects</td>
<td>1.67 mg/kg bw/day (human)</td>
</tr>
<tr>
<td></td>
<td>Dermal worker, long-term exposure, systemic effects</td>
<td>65 mg/kg bw/day (human)</td>
</tr>
<tr>
<td></td>
<td>Consumer, long-term exposure, systemic effects</td>
<td>15 mg/kg bw/day (human)</td>
</tr>
<tr>
<td></td>
<td>Inhalative worker, long-term exposure, systemic effects</td>
<td>310 mg/m³ (human)</td>
</tr>
<tr>
<td></td>
<td>Consumer, long-term exposure, systemic effects</td>
<td>37.2 mg/m³ (human)</td>
</tr>
</tbody>
</table>

- PNECs

<table>
<thead>
<tr>
<th>CAS</th>
<th>fresh water 19 mg/l (not specified)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>marine water 1.9 mg/l (not specified)</td>
</tr>
<tr>
<td></td>
<td>aqua - intermittent release 190 mg/l (not specified)</td>
</tr>
<tr>
<td></td>
<td>soil 2.74 mg/kg (not specified)</td>
</tr>
<tr>
<td></td>
<td>sediment (fresh water) 70.2 mg/kg (not specified)</td>
</tr>
<tr>
<td></td>
<td>sediment (marine water) 7.02 mg/kg (not specified)</td>
</tr>
<tr>
<td></td>
<td>sewage treatment plant 4,168 mg/l (not specified)</td>
</tr>
</tbody>
</table>

- 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
  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: ≥ 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 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: | Yellow |
| Odour: | Specific type |
| Odour threshold: | Not determined. |
| **pH-value:** | Not determined. |
| **Change in condition** |
| Melting point/freezing point: | Undetermined. |
| Initial boiling point and boiling range: | ≈ 190 °C (2-methoxymethylethoxy)pr |
| **Flash point:** | ≈ 75 °C (DIN EN ISO 2719) |
| **Flammability (solid, gas):** | Not applicable. |
| **Ignition temperature:** | ≈ 205 °C (2-methoxymethylethoxy)pr |
| **Decomposition temperature:** | Not determined. |
| **Auto-ignition temperature:** | Product is not self-igniting. |
| **Explosive properties:** | Product is not explosive. However, formation of explosive air/vapour mixtures are possible. |
| **Explosion limits:** |
| Lower: | ≈ 1.3 Vol % (2-methoxymethylethoxy)pr |
| Upper: | ≈ 10.4 Vol % (2-methoxymethylethoxy)pr |
| **Oxidising properties** | None |
| **Vapour pressure at 20 °C:** | ≈ 0.52 hPa (2-methoxymethylethoxy)pr |
| **Density at 20 °C:** | ≈ 0.95 g/cm³ (DIN EN ISO 2811-1) |
| **Relative density** | Not determined. |
| **Vapour density** | Not determined. |
| **Evaporation rate** | Not determined. |
| **Solubility in / Miscibility with water:** | Fully miscible. |
| **Partition coefficient: n-octanol/water:** | Not determined. |
| **Viscosity:** |
| Dynamic at 23 °C: | ≈ 47 mPas (DIN EN ISO 3219) |

(Contd. on page 5)
### 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** Based on available data, the classification criteria are not met.
- **Acute toxicity** Based on available data, the classification criteria are not met.

| CAS: 34590-94-8 2-Methoxy-methyleneoxy-propanol |
|---------------------------------|-----------------|
| LD/LC50 values relevant for classification: |
| Oral | LD50 | 5,135 mg/kg (rat) |
| Dermal | LD50 | >10,000 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: 34590-94-8 2-Methoxy-methyleneoxy-propanol
      - EC50 | 1,919 mg/l (daphnia) (Daphnia magna / 48h) |
      - EC10 | 4,168 mg/l (bacteria) (Pseudomonas putida) |
      - LC50 | 10,000 mg/l (fish) (Pimephales promelas / 96h) |
  - **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.
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· 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 07 04* other organic solvents, washing liquids and mother liquors

· 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.
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:

· 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 AuSV, 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.

· 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
  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