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

1.1 Product identifier
- Trade name: LUBA-print® 2036 A
- UFI: C470-6021-M000-R66H

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

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008
- Flam. Liq. 2 H225 Highly flammable liquid and vapour.
- 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

![GHS02](image)
![GHS07](image)

Signal word Danger

Hazard statements
- H225 Highly flammable liquid and vapour.
- H319 Causes serious eye irritation.

Precautionary statements
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P241 Use explosion-proof [electrical/ventilating/lighting] equipment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- 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.
- 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.
SECTION 3: Composition/information on ingredients

· 3.2 Chemical characterisation: Mixtures
  · Description: Mixture of substances listed below with nonhazardous additions.

<table>
<thead>
<tr>
<th>CAS: 64-17-5</th>
<th>Ethanol</th>
<th>Flam. Liq. 2, H225; Eye Irrit. 2, H319</th>
<th>75-100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>EINECS: 200-578-6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reg.nr.: 01-2119457610-43</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

· 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: 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.

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.
  · 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.
  (Contd. on page 3)
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

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>CAS: 64-17-5 Ethanol</th>
</tr>
</thead>
<tbody>
<tr>
<td>WEL</td>
</tr>
</tbody>
</table>

DNELs

<table>
<thead>
<tr>
<th>CAS: 64-17-5 Ethanol</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
</tr>
<tr>
<td>Dermal</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Inhalative</td>
</tr>
<tr>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
Recommended thickness of the material: 0.5 mm

Soil 0.63 mg/kg (not specified)

Sediment (fresh water) 3.6 mg/kg (not specified)

Sewage treatment plant 580 mg/l (not specified)

Secondary poisoning 720 mg/kg food (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
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 cannot 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: White
Odour: Alcohol-like
Trade name: LUBA-print® 2036 A

(Contd. of page 4)

- Odour threshold: Not determined.
- pH-value: Not determined.
- Change in condition
  Melting point/freezing point: Undetermined.
  Initial boiling point and boiling range: ≈ 78 °C (ETHYL ALCOHOL)
- Flash point: ≈ 12 °C (DIN EN ISO 2719)
- Flammability (solid, gas): Not applicable.
- Ignition temperature: ≈ 425 °C (ETHYL ALCOHOL)
- 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: ≈ 3.5 Vol % (ETHYL ALCOHOL)  
    Upper: ≈ 15 Vol % (ETHYL ALCOHOL)  
    Oxidising properties: None
- Vapour pressure at 20 °C: ≈ 57 hPa (ETHYL ALCOHOL)
- Density at 20 °C: ≈ 0.82 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: ≈ 19 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: Based on available data, the classification criteria are not met.

(Contd. on page 6)
12.6 Other adverse effects

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

Reproductive toxicity

Inhibition of degradation activity in activated sludge is not to be anticipated during correct introduction of 7,060 mg/kg (rat)

12.1 Toxicity

Causes serious eye irritation.

Oral LD50 3,450 mg/kg (mouse)
7,060 mg/kg (rat)
6,300 mg/kg (rabbit)

Dermal LD50 >2,000 mg/kg (rat)

Inhalative LC50/4h 20,000 mg/l (rat)

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.
· 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 Aquatic Toxicity

CAS: 64-17-5 Ethanol

<table>
<thead>
<tr>
<th>Type</th>
<th>AC50</th>
<th>6,500 mg/l (bacteria) (Pseudomonas putida / 16 h)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LC50</td>
<td>&gt;9,268 mg/l (daphnia) (Daphnia magna / 48 h)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt;100 mg/l (daphnia) (Daphnia magna / 24 h)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8,140 mg/l (fish) (Leuciscus idus / 48 h)</td>
</tr>
</tbody>
</table>

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.

Ecological 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.

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.

(Contd. of page 7)
### 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.

<table>
<thead>
<tr>
<th>European waste catalogue</th>
<th>Other organic solvents, washing liquids and mother liquors</th>
</tr>
</thead>
<tbody>
<tr>
<td>07 07 04*</td>
<td></td>
</tr>
</tbody>
</table>

- **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, IMDG, IATA: UN1993

- **14.2 UN proper shipping name**
  - ADR/RID/ADN: 1993 FLAMMABLE LIQUID, N.O.S. (ETHANOL (ETHYL ALCOHOL)), special provision 640D
  - IMDG: FLAMMABLE LIQUID, N.O.S. (ETHANOL (ETHYL ALCOHOL))
  - IATA: FLAMMABLE LIQUID, N.O.S. (ETHANOL)

- **14.3 Transport hazard class(es)**
  - ADR/RID/ADN, IMDG, IATA

<table>
<thead>
<tr>
<th>Class</th>
<th>3 Flammable liquids.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Label</td>
<td>3</td>
</tr>
</tbody>
</table>

- **14.4 Packing group**
  - ADR/RID/ADN, IMDG, IATA: II

- **14.5 Environmental hazards:** Not applicable.

- **14.6 Special precautions for user**
  - Warning: Flammable liquids.
  - Hazard identification number (Kemler code): 33
  - EMS Number: F-E,S-E
  - Stowage Category: B

- **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:** Not applicable.

- **Transport/Additional information:**

<table>
<thead>
<tr>
<th>ADR/RID/ADN</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Limited quantities (LQ)</td>
<td>1L</td>
</tr>
<tr>
<td>Transport category</td>
<td>2</td>
</tr>
<tr>
<td>Tunnel restriction code</td>
<td>D/E</td>
</tr>
</tbody>
</table>
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 5,000 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t
- REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3
- National regulations:
  - Information about limitation of use:
    Employment restrictions concerning juveniles must be observed.
    Employment restrictions concerning pregnant and lactating women must be observed.
  - Water hazard 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
  H225 Highly flammable liquid and vapour.
  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
  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. 2: Flammable liquids – Category 2
  Eye Irrit. 2: Serious eye damage/eye irritation – Category 2