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

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

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
Flamm. Liq. 2 H225 Highly flammable liquid and vapour.
Eye Irrit. 2 H319 Causes serious eye irritation.
STOT SE 3 H336 May cause drowsiness or dizziness.

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 GHS07

Signal word Danger

Hazard-determining components of labelling:
ethyl acetate

Hazard statements
H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

Precautionary statements
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
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.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.


\section*{SECTION 3: Composition/information on ingredients}

\subsection*{3.2 Chemical characterisation: Mixtures}

\textbf{Description:} Mixture of substances listed below with nonhazardous additions.

\begin{tabular}{llll}
\textbf{CAS:} & 141-78-6 & \textbf{CAS:} & 8002-74-2 \\
\textbf{EINECS:} & 205-500-4 & \textbf{EINECS:} & 232-315-6 \\
\textbf{Reg.nr.:} & 01-2119475103-46 & \textbf{Reg.nr.:} & 01-2119488076-30 \\
\end{tabular}

\begin{itemize}
\item ethyl acetate
\item Paraffin waxes and Hydrocarbon waxes
\end{itemize}

\begin{itemize}
\item \textbf{Flam. Liq.} 2, H225; \textbf{Eye Irrit.} 2, H319; \textbf{STOT SE} 3, H336
\item \textbf{substance with a workplace exposure limit}
\end{itemize}

\textbf{Additional information:} For the wording of the listed hazard phrases refer to section 16.

\section*{SECTION 4: First aid measures}

\subsection*{4.1 Description of first aid measures}

\textbf{General information:} Immediately remove any clothing soiled by the product.

\textbf{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.

\textbf{After skin contact:}
Immediately wash with water and soap and rinse thoroughly.

\textbf{After eye contact:}
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

\textbf{After swallowing:}
Do not induce vomiting; call for medical help immediately.

\subsection*{4.2 Most important symptoms and effects, both acute and delayed}
No further relevant information available.

\subsection*{4.3 Indication of any immediate medical attention and special treatment needed}
No further relevant information available.

\subsection*{5.1 Extinguishing media}
Suitable extinguishing agents: CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

\subsection*{5.2 Special hazards arising from the substance or mixture}
Can form explosive gas-air mixtures.

\subsection*{5.3 Advice for firefighters}
Protective equipment: Do not inhale explosion gases or combustion gases.

\subsection*{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:
- Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- Ensure adequate ventilation.
- Do not flush with water or aqueous cleansing agents

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.

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</th>
<th>Limit values</th>
</tr>
</thead>
<tbody>
<tr>
<td>141-78-6 ethyl acetate</td>
<td>Short-term value: 1468 mg/m³, 400 ppm</td>
</tr>
<tr>
<td></td>
<td>Long-term value: 734 mg/m³, 200 ppm</td>
</tr>
<tr>
<td>8002-74-2 Paraffin waxes and Hydrocarbon waxes</td>
<td>Short-term value: 6 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Long-term value: 2 mg/m³</td>
</tr>
</tbody>
</table>
**Trade name:** LUBA-print® 121/C

(Contd. of page 3)

<table>
<thead>
<tr>
<th><strong>CAS: 141-78-6 ethyl acetate</strong></th>
<th><strong>Oral</strong></th>
<th>consumer, long-term exposure, systemic effects</th>
<th>4.5 mg/kg bw/day (human)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dermal</td>
<td>worker, long-term exposure, systemic effects</td>
<td>63 mg/kg bw/day (human)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>consumer, long-term exposure, systemic effects</td>
<td>37 mg/kg bw/day (human)</td>
</tr>
<tr>
<td><strong>Inhalative</strong></td>
<td>worker, long-term exposure, systemic effects</td>
<td>734 mg/m³ (human)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>worker, short-term exposure, local effects</td>
<td>1,468 mg/m³ (human)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>consumer, long-term exposure, systemic effects</td>
<td>367 mg/m³ (human)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>consumer, short-term exposure, local effects</td>
<td>734 mg/m³ (human)</td>
<td></td>
</tr>
</tbody>
</table>

**PNECs**

<table>
<thead>
<tr>
<th><strong>CAS: 141-78-6 ethyl acetate</strong></th>
<th>fresh water</th>
<th>0.24 mg/l (not specified)</th>
</tr>
</thead>
<tbody>
<tr>
<td>marine water</td>
<td>0.024 mg/l (not specified)</td>
<td></td>
</tr>
<tr>
<td>soil</td>
<td>0.148 mg/kg (not specified)</td>
<td></td>
</tr>
<tr>
<td>sediment (fresh water)</td>
<td>1.15 mg/kg (not specified)</td>
<td></td>
</tr>
<tr>
<td>sediment (marine water)</td>
<td>0.115 mg/kg (not specified)</td>
<td></td>
</tr>
<tr>
<td>sewage treatment plant</td>
<td>650 mg/l (not specified)</td>
<td></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

(Contd. on page 5)
SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**
  - General Information
    - **Appearance:**
      - Form: Fluid
      - Colour: White
      - Odour: Fruit-like
      - Odour threshold: Not determined.
    - **pH-value:** Not determined.
  - **Change in condition**
    - Melting point/freezing point: Undetermined.
    - Initial boiling point and boiling range: ≈ 77 °C (ethyl acetate)
  - **Flash point:** ≈ -4 °C (DIN EN ISO 2719)
  - **Flammability (solid, gas):** Not applicable.
  - **Ignition temperature:** ≈ 460 °C (ethyl acetate)
  - **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: ≈ 2.0 Vol % (ethyl acetate)
    - Upper: ≈ 12.8 Vol % (ethyl acetate)
  - **Oxidising properties:** None.
  - **Vapour pressure at 20 °C:** ≈ 97 hPa (ethyl acetate)
  - **Density at 20 °C:** ≈ 0.89 g/cm³ (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 23 °C: ≈ 14 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.

<table>
<thead>
<tr>
<th>LD/LC50 values relevant for classification:</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS: 141-78-6 ethyl acetate</td>
</tr>
<tr>
<td>Oral</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Dermal</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Inhalative</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

CAS: 8002-74-2 Paraffin waxes and Hydrocarbon waxes

<table>
<thead>
<tr>
<th>Oral</th>
<th>LD50</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&gt;5,000 mg/kg (rat)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Primary irritant effect:</th>
</tr>
</thead>
</table>
| Skin corrosion/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 |
| May cause drowsiness or dizziness. |
| 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:

<table>
<thead>
<tr>
<th>CAS: 141-78-6 ethyl acetate</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC50</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>LC50</td>
</tr>
<tr>
<td></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.
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, IMDG, IATA
    - UN1173

- **14.2 UN proper shipping name**
  - ADR/RID/ADN
    - 1173 ETHYL ACETATE mixture
  - IMDG, IATA
    - ETHYL ACETATE mixture

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

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

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

- **14.6 Special precautions for user**
  - **Hazard identification number (Kemler code):** 33
    - Warning: Flammable liquids.

(Contd. on page 8)
Safety data sheet  
according to 1907/2006/EC, Article 31

Trade name: LUBA-print® 121/C

<table>
<thead>
<tr>
<th>EMS Number:</th>
<th>F-E,S-D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stowage Category</td>
<td>B</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Transport/Additional information:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ADR/RID/ADN</td>
<td></td>
</tr>
<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>

| UN "Model Regulation": | UN 1173 ETHYL ACETATE MIXTURE, 3, II |

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:

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
  - 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.

- Relevant phrases
  - H225 Highly flammable liquid and vapour.
  - H319 Causes serious eye irritation.
  - H336 May cause drowsiness or dizziness.

- Department issuing SDS:
  - E-Mail: msds@munzing.com

- Abbreviations and acronyms:
  - ADR: Accord européen sur le transport des marchandises dangereuses par Route
  - 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
### Safety data sheet

**according to 1907/2006/EC, Article 31**

**Trade name:** LUBA-print® 121/C

<table>
<thead>
<tr>
<th>Classification</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50</td>
<td>Lethal dose, 50 percent</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, Bioaccumulative and Toxic</td>
</tr>
<tr>
<td>vPvB</td>
<td>very Persistent and very Bioaccumulative</td>
</tr>
<tr>
<td>Flam. Liq. 2</td>
<td>Flammable liquids – Category 2</td>
</tr>
<tr>
<td>Eye Irrit. 2</td>
<td>Serious eye damage/eye irritation – Category 2</td>
</tr>
<tr>
<td>STOT SE 3</td>
<td>Specific target organ toxicity (single exposure) – Category 3</td>
</tr>
</tbody>
</table>

(Contd. of page 8)