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

- **1.1 Product identifier**
  - Trade name: LUBA-print® 121/F (ND)
  - UFI: N8N0-MUNS-F00Q-XECD

- **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** Wax additive for paints and printing inks

- **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

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**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.
  - STOT SE 3      H336 May cause drowsiness or dizziness.
  - Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

- **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**

![](HS.png)

- **GHS02**
- **GHS07**
- **GHS09**

- **Signal word** Warning

- **Hazard-determining components of labelling:**
  - Hydrocarbons, C10, aromatics, <1% naphthalene

- **Hazard statements**
  - H226 Flammable liquid and vapour.
  - H336 May cause drowsiness or dizziness.
  - H411 Toxic to aquatic life with long lasting effects.

- **Precautionary statements**
  - **P210** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
  - **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].
  - **P405** Store locked up.
  - **P501** Dispose of contents/container in accordance with local/regional/national/international regulations.

(Contd. on page 2)
SECTION 3: Composition/information on ingredients

3.2 Chemical characterisation: Mixtures

- Description: Mixture of substances listed below with nonhazardous additions.

- Dangerous components:

<table>
<thead>
<tr>
<th>CAS</th>
<th>EINECS</th>
<th>Regulation number</th>
<th>Description</th>
<th>Risk phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>108-65-6</td>
<td>203-603-9</td>
<td>01-2119475791-29</td>
<td>2-methoxy-1-methylethyl acetate</td>
<td>Flamm. Liq. 3; H226 - 50-75%</td>
</tr>
<tr>
<td>918-811-1</td>
<td>2119463583-34</td>
<td></td>
<td>Hydrocarbons, C10; aromatics, &lt;1% naphthalene</td>
<td>Asp. Tox. 1, H304; Aquatic Chronic 2; H411; STOT SE 3; H336 - 20-50%</td>
</tr>
<tr>
<td>8002-74-2</td>
<td>232-315-6</td>
<td>01-2119488076-30</td>
<td>Paraffin waxes and Hydrocarbon waxes</td>
<td></td>
</tr>
<tr>
<td>91-20-3</td>
<td>202-049-5</td>
<td></td>
<td>naphthalene</td>
<td></td>
</tr>
<tr>
<td>70657-70-4</td>
<td>274-724-2</td>
<td></td>
<td>2-methoxypropyl acetate</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.
- 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.
- Skin contact: Immediately wash with water and soap and rinse thoroughly.
- Eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- 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.

Contd. of page 3
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.
- Inform respective authorities in case of seepage into water course or sewage system.
- 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 Additional information about design of technical facilities: No further data; see item 7.

(Contd. of page 2)

(Contd. of page 4)
8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:

- **CAS: 108-65-6 2-methoxy-1-methylethyl acetate**
  - WEL: Short-term value: 548 mg/m³, 100 ppm
  - Long-term value: 274 mg/m³, 50 ppm

- **CAS: 8002-74-2 Paraffin waxes and Hydrocarbon waxes**
  - WEL: Short-term value: 6 mg/m³
  - Long-term value: 2 mg/m³

DNELs

- **CAS: 108-65-6 2-methoxy-1-methylethyl acetate**
  - Oral consumer, long-term exposure, systemic effects: 1.67 mg/kg bw/day (human)
  - Dermal worker, long-term exposure, systemic effects: 153.5 mg/kg bw/day (human)
  - Inhalative worker, long-term exposure, systemic effects: 275 mg/m³ (human)

Hydrocarbons, C10, aromatics, <1% naphthalene

- Oral consumer, long-term exposure, systemic effects: 7.5 mg/kg bw/day (human)
- Dermal worker, long-term exposure, systemic effects: 12.5 mg/kg bw/day (human)
- Inhalative worker, long-term exposure, systemic effects: 151 mg/m³ (human)

PNECs

- **CAS: 108-65-6 2-methoxy-1-methylethyl acetate**
  - fresh water: 0.635 mg/l (not specified)
  - marine water: 0.0635 mg/l (not specified)
  - aqua - intermittent release: 6.35 mg/l (not specified)
  - soil: 0.29 mg/kg (not specified)
  - sediment (fresh water): 3.29 mg/kg (not specified)
  - sediment (marine water): 0.329 mg/kg (not specified)
  - sewage treatment plant: 100 mg/l (not specified)

8.2 Exposure controls

Personal protective equipment:

General protective and hygienic measures:

- 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

Additional information: The lists valid during the making were used as basis.
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: White
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: ≈ 146 °C (01-2119475791-29)

Flash point: ≈ 45 °C (DIN EN ISO 2719)

Flammability (solid, gas): Not applicable.

Ignition temperature: ≈ 315 °C (01-2119475791-29)

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: ≈ 0.6 Vol % (solvent naphtha (heavy))
Upper: ≈ 10.8 Vol % (01-2119475791-29)

Oxidising properties: None.

Vapour pressure: Not determined.

Density at 20 °C: ≈ 0.93 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: ≈ 180 mPas (DIN EN ISO 3219)
- Kinematic at 40 °C: ≈ 24 mm²/s (DIN EN ISO 51562)

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.

LD/LC50 values relevant for classification:

**CAS: 108-65-6 2-methoxy-1-methylethyl acetate**

<table>
<thead>
<tr>
<th>Route</th>
<th>LD50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>&gt;5,000 mg/kg (rat)</td>
</tr>
<tr>
<td>Dermal</td>
<td>&gt;2,000 mg/kg (rat)</td>
</tr>
<tr>
<td>Inhalative</td>
<td>35.7 mg/l (rat)</td>
</tr>
</tbody>
</table>

**Hydrocarbons, C10, aromatics, <1% naphthalene**

<table>
<thead>
<tr>
<th>Route</th>
<th>LD50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>6,318 mg/kg (rat) (OECD 401)</td>
</tr>
<tr>
<td>Dermal</td>
<td>&gt;2,000 mg/kg (rabbit) (OECD 402)</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Route</th>
<th>LD50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>&gt;5,000 mg/kg (rat)</td>
</tr>
<tr>
<td>Dermal</td>
<td>490 mg/kg (rat)</td>
</tr>
<tr>
<td></td>
<td>5,000 mg/kg (rat)</td>
</tr>
</tbody>
</table>

- 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
    May cause drowsiness or dizziness.
SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity:

**CAS: 108-65-6 2-methoxy-1-methylethyl acetate**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC50</td>
<td>&gt;1,000 mg/l (algae) (Selenastrum capricornutum / 72 h (OECD 201))</td>
</tr>
<tr>
<td></td>
<td>&gt;500 mg/l (daphnia) (Daphnia magna / 48 h)</td>
</tr>
<tr>
<td>EC10</td>
<td>&gt;1,000 mg/l (bacteria) (activated sludge / 0,5 h (ISO 8192))</td>
</tr>
<tr>
<td>LC50</td>
<td>134 mg/l (fish) (Oncorhynchus mykiss / 96 h (OECD 203))</td>
</tr>
<tr>
<td>NOEC</td>
<td>&gt;100 mg/l (daphnia) (Daphnia magna / 21 d (OECD 202))</td>
</tr>
</tbody>
</table>

**Hydrocarbons, C10, aromatics, <1% naphthalene**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LL50</td>
<td>2-5 mg/l (fish) (Oncorhynchus aquabonita / 96 h)</td>
</tr>
<tr>
<td>EL50</td>
<td>1-3 mg/l (algae) (green algae / 72 h)</td>
</tr>
<tr>
<td></td>
<td>3-10 mg/l (daphnia) (Daphnia magna / 48 h)</td>
</tr>
<tr>
<td>NOELR</td>
<td>0.771 mg/l (daphnia) (Daphnia magna / 21 days)</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.

Ecotoxicological effects:

Remark: Toxic for fish

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 2 (German Regulation) (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Toxic for aquatic organisms

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
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. (2-methoxy-1-methylethyl acetate), ENVIRONMENTALLY HAZARDOUS FLAMMABLE LIQUID, N.O.S. (2-methoxy-1-methylethyl acetate), Hydrocarbons, C10, aromatics, <1% naphthalene), MARINE POLLUTANT
IMDG FLAMMABLE LIQUID, N.O.S. (2-methoxy-1-methylethyl acetate)
IATA

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

Class 3 Flammable liquids.
Label 3

IATA

Class 3 Flammable liquids.
Label 3

14.4 Packing group
ADR/RID/ADN, IMDG, IATA III

14.5 Environmental hazards:
Product contains environmentally hazardous substances:
Hydrocarbons, C10, aromatics, <1% naphthalene
Symbol (fish and tree)

14.6 Special marking (ADR/RID/ADN):
Symbol (fish and tree)

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

14.8 Transport/Additional information:
ADR/RID/ADN
Limited quantities (LQ) 5L

Warning: Flammable liquids.
EMS Number: F-E,S-E
Stowage Category A

(Contd. of page 7)
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
  E2 Hazardous to the Aquatic Environment
  P5c FLAMMABLE LIQUIDS
- Qualifying quantity (tonnes) for the application of lower-tier requirements 200 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements 500 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 2 (Self-assessment): 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.
H304 May be fatal if swallowed and enters airways.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H351 Suspected of causing cancer.
H360D May damage the unborn child.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.

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)
Trade name: LUBA-print® 121/F (ND)

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 - oral – Category 4
Carc. 2: Carcinogenicity – Category 2
Repr. 1B: Reproductive toxicity – Category 1B
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
Asp. Tox. 1: Aspiration hazard – Category 1
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2