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

· 1.1 Product identifier
  · Trade name: LUBA-print® 934/G (ND)
  · UFI: 0P01-X0FK-600H-WTUY

· 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): mds@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
  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
    GHS07 GHS09

· Signal word Warning

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

· Hazard statements
  H336 May cause drowsiness or dizziness.
  H411 Toxic to aquatic life with long lasting effects.

· Precautionary statements
  P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
  P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
  P312 Call a POISON CENTER/doctor if you feel unwell.
  P403+P233 Store in a well-ventilated place. Keep container tightly closed.
  P405 Store locked up.
  P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· 2.3 Other hazards Thermal decomposition may lead to release of toxic and corrosive gases.

· Results of PBT and vPvB assessment
  · PBT: None.
Fluorophosgene (COF₂)

According to 1907/2006/EC, Article 31

- Immediate removal of any clothing soiled by the product.
- 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
- Special hazards arising from the substance or mixture
  - Formation of toxic gases is possible during heating or in case of fire.
  - In case of fire, the following can be released:
    - Hydrogen fluoride (HF)
    - Fluorophosphogene (COF₂)
    - Can form explosive gas-air mixtures.
- 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.

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

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
- Special hazards arising from the substance or mixture
  - Formation of toxic gases is possible during heating or in case of fire.
  - In case of fire, the following can be released:
    - Hydrogen fluoride (HF)
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    - Can form explosive gas-air mixtures.
- 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.

- **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.

- **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

- **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:
    - The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

- **DNELs**

<table>
<thead>
<tr>
<th>Modality</th>
<th>Concentration/Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral, consumer, long-term exposure, systemic effects</td>
<td>7.5 mg/kg bw/day (human)</td>
</tr>
<tr>
<td>Dermal, worker, long-term exposure, systemic effects</td>
<td>12.5 mg/kg bw/day (human)</td>
</tr>
<tr>
<td>Inhalative, consumer, long-term exposure, systemic effects</td>
<td>7.5 mg/kg bw/day (human)</td>
</tr>
<tr>
<td>Inhalative, worker, long-term exposure, systemic effects</td>
<td>151 mg/m³ (human)</td>
</tr>
<tr>
<td>Inhalative, consumer, long-term exposure, systemic effects</td>
<td>32 mg/m³ (human)</td>
</tr>
</tbody>
</table>

(Contd. on page 4)
### 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**

- **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: \( \approx 183 \, ^\circ\text{C} \) (solvent naphtha (heavy))

- Flash point: \( \approx 61 \, ^\circ\text{C} \) (DIN EN ISO 2719)

- Flammability (solid, gas): Not applicable.

- Ignition temperature: > 400 \( ^\circ\text{C} \) (solvent naphtha (heavy))

- 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:
- **Upper:** ≈ 7.0 Vol% (solvent naphtha (heavy))
- **Lower:** ≈ 0.6 Vol% (solvent naphtha (heavy))

### Oxidising properties
- None.

### Vapour pressure
- Not determined.

### Density at 20 °C:
- ≈ 0.92 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:** ≈ 170 mPas (DIN EN ISO 3219)
- **Kinematic at 40 °C:** ≈ 29 mm²/s (DIN EN ISO 51562)

### Solvent separation test
- Not determined

### 9.2 Other information
- No further relevant information available.

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### 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 and stored 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:**
  - Possible in traces.
  - Hydrogen fluoride
  - Carbonyl fluoride
  - Fluorophosgene
  - Tetrafluorethylene
  - Hexafluorpropylene
  - Perfluorobutylene

### Additional information:
When heated, gaseous decomposition products may be generated from PTFE, which can cause "fluoropolymer fever" on inhalation. Inhalation/eye contact: in high concentrations irritating to the mucous membranes, narcotic effect and influence on power of reaction and loss of coordination possible. Prolonged inhalation of vapours in high concentrations may lead to headache, giddiness and nausea.
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:
  - Hydrocarbons, C10, aromatics, <1% naphthalene
    - Oral LD50 6,318 mg/kg (rat) (OECD 401)
    - Dermal LD50 >2,000 mg/kg (rabbit) (OECD 402)
  - CAS: 91-20-3 naphthalene
    - Oral LD50 490 mg/kg (rat)
    - Dermal LD50 5,000 mg/kg (rat)

- 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.
  - 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:
    - Hydrocarbons, C10, aromatics, <1% naphthalene
      - LL50 2-5 mg/l (fish) (Oncorhynchus aquabonita / 96 h)
      - EL50 1-3 mg/l (alga) (green alga / 72 h)
      - 3-10 mg/l (daphnia) (Daphnia magna / 48 h)
      - NOELR 0.771 mg/l (daphnia) (Daphnia magna / 21 days)
  - 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

- 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 UN3082

- 14.2 UN proper shipping name
  - ADR/RID/ADN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Hydrocarbons, C10, aromatics, <1% naphthalene, NAPHTHALENE, CRUDE)
  - IMDG ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Hydrocarbons, C10, aromatics, <1% naphthalene, NAPHTHALENE, CRUDE), MARINE POLLUTANT
  - IATA ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Hydrocarbons, C10, aromatics, <1% naphthalene, NAPHTHALENE, CRUDE)

- 14.3 Transport hazard class(es)
  - ADR/RID/ADN, IMDG, IATA
    - Class 9 Miscellaneous dangerous substances and articles.
    - Label 9

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

- 14.5 Environmental hazards:
  - Marine pollutant: Product contains environmentally hazardous substances: Hydrocarbons, C10, aromatics, <1% naphthalene
    - Symbol (fish and tree)
  - Special marking (ADR/RID/ADN): Symbol (fish and tree)
  - Special marking (IATA): Symbol (fish and tree)

- 14.6 Special precautions for user
  - Hazard identification number (Kemler code): Warning: Miscellaneous dangerous substances and articles.
    - 90
  - EMS Number: F-A-S-F

(Contd. of page 6)
Abbreviations and acronyms:

Transport category

A Chemical Safety Assessment has not been carried out.

Qualifying quantity (tonnes) for the application of lower-tier requirements

500 t

ADR/RID/ADN

UN "Model Regulation": UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (HYDROCARBONS, C10, AROMATICS, <1% NAPHTHALENE, NAPHTHALENE CRUDE), 9, III

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

- Directive 2012/18/EU
- Seveso category E2. Hazardous to the Aquatic Environment
- 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

H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H336 May cause drowsiness or dizziness.
H351 Suspected of causing cancer.
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: mstd@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)
LD50: Lethal dose, 50 percent
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Acute Tox. 4: Acute toxicity - oral – Category 4
Carc. 2: Carcinogenicity – Category 2
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