SAFETY DATA SHEET
White Spirit (LI 200), Lacknafta

SDS according to Regulation (EC) No. 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), Annex II-EU

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

Date issued: 07.05.2014

1.1. Product identifier
Product name: White Spirit (LI 200), Lacknafta
Chemical name: Hydrocarbons, C9-C12, n-alkanes, 100 %, isoalkanes, cyclics, aromatics (2-25%)
Synonyms: Lacknafta, Naphtha (petroleum), hydrodesulfurized, heavy.
REACH Reg. No.: 01-2119458049-33-0000
EC no.: 919-446-0
Article no.: 11000000

1.2. Relevant identified uses of the substance or mixture and uses advised against
Use of the substance/preparation: For the preparation of paints and as a solvent. General purpose cleaner.

1.3. Details of the supplier of the safety data sheet
Manufacturer
Company name: Fred Holmberg & Co AB
Office address: Geijersgatan 8
Postal address: Box 60056
Postcode: S-216 10
City: Limhamn
Country: Sweden
Tel: +46 (0)40 15 79 20
Fax: +46 (0)40 16 22 95
E-mail: info@holmberg.se
Website: http://www.holmberg.se/en/

1.4. Emergency telephone number
Emergency telephone: 112 (Europe)

SECTION 2: Hazards identification

2.1. Classification of substance or mixture
Classification according to 67/548/EEC or 1999/45/EC
R66, R67
Xn; R65
N; R51/53
R10

Classification according to Regulation (EC) No 1272/2008 [CLP/GHS]
Flam. Liq. 3; H226;
Asp. tox 1; H304;
STOT SE3; H336;
Aquatic Chronic 2; H411;
; EUH 066;

2.2. Label elements
Hazard Pictograms (CLP)
Signal word: Danger

Hazard statements:
- H226 Flammable liquid and vapour.
- H304 May be fatal if swallowed and enters airways.
- H336 May cause drowsiness or dizziness.
- H411 Toxic to aquatic life with long lasting effects.
- EUH 066 Repeated exposure may cause skin dryness or cracking.

Precautionary statements:
- P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
- P243 Take precautionary measures against static discharge.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

2.3. Other hazards
Other hazards: Not known.

SECTION 3: Composition/information on ingredients

3.1. Substances

<table>
<thead>
<tr>
<th>Substance</th>
<th>Identification</th>
<th>Classification</th>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>White Spirit (LI 200)</td>
<td>EC no.: 919-446-0</td>
<td>R10, Xn; R65, R66, R67, N, R51/53 Flam. Liq. 3; H226; Asp. tox 1; H304; STOT RE1; H372; STOT SE3; H336; Aquatic Chronic 2, H411; EUH 066;</td>
<td>100 %</td>
</tr>
</tbody>
</table>

Description of the mixture:
Contains benzene < 0.1 vol-%, n-hexane < 1 % and aromatic hydrocarbons 14 - 20 vol-%.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation: Move the exposed person to fresh air at once. Get medical attention if any discomfort continues.

Skin contact: Remove contaminated clothing immediately and wash skin with soap and water.

Eye contact: Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyes wide apart. Get medical attention if any discomfort continues.

Ingestion: DO NOT induce vomiting if swallowed chemical is dissolved in petroleum-
4.2. Most important symptoms and effects, both acute and delayed
Information for health personnel
Treat symptomatically. Do not give victim anything to drink if he is unconscious.

4.3. Indication of any immediate medical attention and special treatment needed
Specific details on antidotes
No recommendation given.

SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media
Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.

5.2. Special hazards arising from the substance or mixture
Fire and explosion hazards
Flammable liquid and vapour. Solvent vapours may form explosive mixtures with air.
Hazardous combustion products
Fire creates: Carbon monoxide (CO). Carbon dioxide (CO2).

5.3. Advice for firefighters
Fire fighting procedures
No specific fire fighting procedure given.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Personal protection measures
Ensure suitable personal protection (including respiratory protection) during removal of spillages in a confined area. Ventilate well. Stop leak if possible without risk. Avoid contact with skin and eyes. Do not breathe vapour.

6.2. Environmental precautions
Environmental precautionary measures
Avoid discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up
Cleaning method
Dam and absorb spillages with sand, earth or other non-combustible material.

6.4. Reference to other sections
Other instructions
No recommendation given.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Handling
Keep away from heat, sparks and open flame. Take precautionary measures against static discharges. Mechanical ventilation may be required.

Protective Safety Measures
Advice on general occupational hygiene
Provide easy access to water supply and eye wash facilities.

7.2. Conditions for safe storage, including any incompatibilities
Storage
Keep away from heat, sparks and open flame. Ground container and transfer equipment to eliminate static electric sparks. Store in a cool and well-ventilated place.

7.3. Specific end use(s)
Specific use(s)
Not entered.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
Other Information about threshold limit values
Norske grenseverdier; FOR-2011-12-06-1358 vedlegg 1.
White Spirit (aromatinnhold <22%):
8 t.: 50ppm, 275 mg/m³ (2003)

**DNEL / PNEC**

<table>
<thead>
<tr>
<th>Method of testing</th>
<th>Contents</th>
</tr>
</thead>
</table>
| DNEL              | Group: Worker
|                   | Exposure route: Dermal
|                   | Exposure frequency: Long term (repeated)
|                   | Value: 44 mg/m³ |

| DNEL              | Group: Worker
|                   | Exposure route: Inhalation
|                   | Exposure frequency: Short term (acute)
|                   | Value: 570 mg/m³ |

| DNEL              | Group: Worker
|                   | Exposure route: Inhalation
|                   | Exposure frequency: Long term (repeated)
|                   | Value: 330 mg/m³ |

| DNEL              | Group: Consumer
|                   | Exposure route: Oral
|                   | Exposure frequency: Long term (repeated)
|                   | Value: 26 mg/kg/day |

| DNEL              | Group: Consumer
|                   | Exposure route: Inhalation
|                   | Exposure frequency: Long term (repeated)
|                   | Value: 71 mg/m³ |

| DNEL              | Group: Consumer
|                   | Exposure route: Inhalation
|                   | Exposure frequency: Short term (acute)
|                   | Value: 570 mg/m³ |

**Exposure guidelines**

- Country of origin: Sverige
- Limit value type: KTV
- OEL Short Term Value: 600 mg/m³
- Source: Nationella hygieniska gränsvärden, AFS 2005:17
- NGV, 100 mg/m³

**8.2. Exposure controls**

Limitation of exposure on workplace

Provide adequate ventilation. Observe Occupational Exposure Limits and minimise the risk of inhalation of vapours. Protective gloves and goggles are recommended. Provide eyewash, quick drench.

**Safety signs**

**Respiratory protection**

Respiratory protection must be used if air contamination exceeds acceptable level. Use respiratory equipment with gas filter, type A2.

**Hand protection**

Use protective gloves. Chemical resistant gloves required for prolonged or repeated contact. Gloves of nitrile rubber, PVA or Viton are recommended.

**Eye / face protection**

Use safety goggles or face shield in case of splash risk.

**Skin protection**

Skin protection (except hands) Wear appropriate clothing to prevent any possibility of skin contact.

**Hygiene / Environmental**

Specific hygiene measures Wash hands after contact.
SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Fluid</td>
</tr>
<tr>
<td>Colour</td>
<td>Colourless</td>
</tr>
<tr>
<td>Odour</td>
<td>Hydrocarbon</td>
</tr>
<tr>
<td>Comments, pH (as supplied)</td>
<td>Not relevant.</td>
</tr>
<tr>
<td>Melting point/melting range</td>
<td>Value: -15 °C</td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>Value: 150-200 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>Value: &gt; 39 °C</td>
</tr>
<tr>
<td>Explosion limit</td>
<td>Value: 0.6-7 %</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>Value: ~ 0.23 kPa, Test temperature: 20 °C</td>
</tr>
<tr>
<td>Vapour density</td>
<td>Value: &gt; 3</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>Value: 720-825 kg/m3, Test temperature: 15 °C</td>
</tr>
<tr>
<td>Solubility in fat</td>
<td>Data lacking.</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>Value: &gt; 3</td>
</tr>
<tr>
<td>Spontaneous combustability</td>
<td>Value: ~ 250 °C</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Value: &lt; 2 mm2/s, Method of testing: Kinematisk, Test temperature: 40 °C</td>
</tr>
<tr>
<td>Comments, Viscosity</td>
<td>Viskositet, dynamisk &lt; 50mPas (20°C)</td>
</tr>
</tbody>
</table>

9.2. Other information

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity
Heating may cause a fire.

10.2. Chemical stability

Stability
Stable under the prescribed storage conditions.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions
Not known.

10.4. Conditions to avoid

Conditions to avoid
Avoid heat, flames and other sources of ignition.

10.5. Incompatible materials

Materials to avoid
Avoid contact with oxidising agents (e.g. nitric acid, peroxides and chromates). Strong acids.

10.6. Hazardous decomposition products

Hazardous decomposition products
Fire creates: Carbon monoxide (CO). Carbon dioxide (CO2).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological Information:

Other toxicological data
Acute Toxicity (Oral LD50): mg/kg (oral rat) > 15 000
Acute Toxicity (Inhalation LC50): mg/l (vapours) (4h) (rat) >13.1
Acute Toxicity (Dermal LD50): mg/kg Rabbit > 3400

Potential acute effects

Inhalation
In high concentrations, vapours are narcotic and may cause headache, fatigue, dizziness and nausea. Gas or vapour in high concentrations may irritate respiratory system.

Skin contact
Prolonged or frequent contact may cause redness, itching, eczema and skin
cracking. Defats the skin.

Eye contact May irritate and cause redness and pain.

Ingestion Aspiration hazard: Pneumonia may be the result if vomited material containing solvents reaches the lungs. Ingestion of large amounts may cause unconsciousness. However, ingestion may cause nausea, headache, dizziness and intoxication. Ingestion may cause irritation of the gastrointestinal tract, vomiting and diarrhoea.

**Delayed effects / repeated exposure**

- Sensitisation Not known.
- Chronic effects None known.

**Carcinogenic, Mutagenic or Reprotoxic**

- Carcinogenicity None.
- Mutagenicity None.
- Teratogenic properties Not known.
- Reproductive toxicity Not known.

### SECTION 12: Ecological information

#### 12.1. Toxicity

**Acute aquatic, fish**

- Value: 10-30 mg/l
- Method of testing: LL50 (OECD 203)
- Duration: 96h

**Acute aquatic, algae**

- Value: 0.58-1.2 mg/l
- Method of testing: EC50 (OECD 201)
- Duration: 96h

**Acute aquatic, Daphnia**

- Value: 10-22 mg/l
- Method of testing: EL50 (OECD 202)
- Duration: 48h

**Other ecotoxicological information, fish**

- Chronic aquatic toxicity: fish: NOELR/28d = 0.13 mg/L (QSAR)

**Other ecotoxicological information, crustaceans**

- Chronic aquatic toxicity:
  - NOEC/21d = 0.10-0.37 mg/L; LOEC/21d = 0.20-0.83 mg/L; EC10/21d = 0.11-0.25 mg/L (OECD 211)

#### 12.2. Persistence and degradability

**Degradation half life** Readily degradable (OECD 301F).

#### 12.3. Bioaccumulative potential

**Bioaccumulative potential** No data available on bioaccumulation.

#### 12.4. Mobility in soil

**Mobility**

The product is insoluble in water and will spread on the water surface. The product contains volatile substances, which may spread in the atmosphere.

**Surface tension**

- Value: 24-27 mN/m (@25°C)
- Method of testing: Wilhelmy plate

#### 12.5. Results of PBT and vPvB assessment

**PBT assessment results** This substance is not classified as PBT or vPvB.

#### 12.6. Other adverse effects

**Other adverse effects / Remarks** None known.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Specify the appropriate methods of disposal

- Confirm disposal procedures with environmental engineer and local regulations.
- Product classified as hazardous waste Yes
Packaging classified as hazardous waste: Yes
EWC waste code: EWC: 070104 other organicsolvents, washing liquids and mother liquors

**SECTION 14: Transport information**

**14.1. UN number**
- ADR: 1300
- RID: 1300
- IMDG: 1300
- ICAO/IATA: 1300

**14.2. UN proper shipping name**
- ADR: TURPENTINE SUBSTITUTE
- RID: TURPENTINE SUBSTITUTE
- IMDG: TURPENTINE SUBSTITUTE
- ICAO/IATA: TURPENTINE SUBSTITUTE

**14.3. Transport hazard class(es)**
- ADR: 3
- Hazard no.: 30
- RID: 3
- IMDG: 3
- ICAO/IATA: 3

**14.4. Packing group**
- ADR: III
- RID: III
- IMDG: III
- ICAO/IATA: III

**14.5. Environmental hazards**
- IMDG Marine pollutant: Yes

**14.6. Special precautions for user**
- EmS: F-E, S-E

**14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Additional information.
- Bulk: (MARPOL 73/78, Annex II): Noxious liquid, F, (6) n.o.s. (LI 200 contains white spirit, low (15 - 20 % aromatic), Pollution Category Y, Ship Type 2. According to MARPOL: "Nonsolidifying substance".

**SECTION 15: Regulatory information**

**EC no.** 919-446-0

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

Other Label Information

Legislation and regulations
- Dangerous Substance Directive 67/548/EEC.

**15.2. Chemical safety assessment**
SECTION 16: Other information

**Hazard symbol**

R-phrases

- R10 Flammable.
- R65 Harmful: may cause lung damage if swallowed.
- R66 Repeated exposure may cause skin dryness or cracking.
- R67 Vapours may cause drowsiness and dizziness.
- R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrases

- S7 Keep container tightly closed.
- S16 Keep away from sources of ignition - No smoking.

Classification according to Regulation (EC) No 1272/2008 [CLP/GHS]

- Flam. Liq. 3; H226;
- Asp. tox 1; H304;
- STOT SE3; H336;
- Aquatic Chronic 2; H411;

List of relevant R-phrases (under headings 2 and 3).

- R65 Harmful: may cause lung damage if swallowed.
- R67 Vapours may cause drowsiness and dizziness.
- R10 Flammable.
- R66 Repeated exposure may cause skin dryness or cracking.
- R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

List of relevant H-phrases (Section 2 and 3).

- H304 May be fatal if swallowed and enters airways.
- H226 Flammable liquid and vapour.
- H336 May cause drowsiness or dizziness.
- EUH 066 Repeated exposure may cause skin dryness or cracking.
- H372 Causes damage to organs through prolonged or repeated exposure
- H411 Toxic to aquatic life with long lasting effects.

Version 5

Responsible for safety data sheet Fred Holmberg & Co AB