SAFETY DATA SHEET

Trade name: LEYBONOL LVO 100

1. Identification of the substance/ mixture and of the company/ undertaking

Product identifier

Trade name: LEYBONOL LVO 100

Product description: Mineral oil, free of additives

Relevant identified uses of the substance or mixture and uses advised against

Use: Vacuum pump oil, Industrial use lubricant

Uses advised against: This product should not be used in breathing air compressors.

Order number:

<table>
<thead>
<tr>
<th>Number</th>
<th>Package Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>L10001</td>
<td>1 Liter</td>
</tr>
<tr>
<td>L10005</td>
<td>5 Liter</td>
</tr>
<tr>
<td>L10020</td>
<td>20 Liter</td>
</tr>
<tr>
<td>L10099</td>
<td>208 Liter</td>
</tr>
</tbody>
</table>

Details of the supplier of the safety data sheet

Supplier: Oerlikon Leybold Vacuum GmbH
Bonner Str. 498
D-50968 Cologne
Phone  +49-221-347-0
Fax  +49-221-347-1250
Internet  www.oerlikon.com/leyboldvacuum
E-Mail: documentation.vacuum@oerlikon.com
Emergency telephone number: +49/ (0)700 24112112 (OLC)

2. Hazards identification

Classification of the substance or mixture

Classification information: This product does not meet the classification and labelling criteria given in the Regulation (EC) No 1272/2008 (CLP).

3. Composition/information on ingredients

Chemical characterization: Highly refined base oil (IP 346 DMSO extract < 3%)

Substance / product identification:

| Index no. 649-454-00-7 |
| CAS no. 64741-88-4 |
| EC no. 265-090-8 |

4. First aid measures

General information: In all cases of doubt, or when sickness symptoms persist, seek medical attention. Remove contaminated clothing and shoes immediately, and launder thoroughly before reusing.
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**After inhalation:**  
Remove affected person from the immediate area. Ensure supply of fresh air.

**After skin contact:**  
When in contact with the skin, clean with soap and water.

**After eye contact:**  
Separate eyelids, wash the eyes thoroughly with water (15 min.).

**After ingestion:**  
Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor.

**Advice to doctor**

**Treatment:**  
Treat symptomatically

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**5. Firefighting measures**

**Suitable extinguishing media:**  
extinguishing powder; Foam; Carbon dioxide

**Extinguishing media that must not be used for safety reasons:**  
Water

**Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases:**  
In the event of fire, the following can be released: Carbon monoxide (CO); Carbon dioxide (CO2); Combustion products of this material have to be classed invariably as respiratory poison.

**Special protective equipment for fire-fighters:**  
Use self-contained breathing apparatus. Wear protective clothing.

**Other information:**  
Run-off water from fire fighting must not be discharged into drains or enter surface water. Pressure increase, bursting and explosion hazard during heating.

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**6. Accidental release measures**

**Personal precautions:**  
Refer to protective measures listed in sections 7 and 8. Ensure adequate ventilation.

**Environmental precautions:**  
Do not discharge into the drains/surface waters/groundwater. Do not discharge into the subsoil/soil.

**Methods for cleaning up/taking up:**  
Pick up with absorbent material (e.g., sand, sawdust, general-purpose binder). Send in suitable containers for recovery or disposal.

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**7. Handling and storage**

**Handling**

**Advice on safe handling:**  
Observe the usual precautions for handling chemicals. Provide good ventilation of working area (local exhaust ventilation, if necessary).
Storage Requirements for storage rooms and vessels:
Always keep in containers of same material as the original one. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Advice on storage assembly:
Do not store together with: Oxidizing agents

Further information on storage conditions:
Keep container tightly closed and dry in a cool, well-ventilated place. Protect from heat and direct sunlight.

8. Exposure controls/personal protection

Exposure limit values:
None.

Exposure controls

Personal protective equipment

Respiratory protection:
If workplace exposure limits are exceeded, a respiration protection approved for this particular job must be worn. In case of aerosol and mist formation, take appropriate measures for breathing protection in the event workplace threshold values are not specified.

Hand protection:
Sufficient protection is given wearing suitable protective glove checked according to i.e. EN 374, in the event of risk of skin contact with the product. Before use, the protective glove should be tested in any case for its specific work-station suitability (i.e. mechanical resistance, product compatibility and antistatic properties). Adhere to the manufacturer's instructions and information relating to the use, storage, care and replacement of protective gloves. Protective gloves shall be replaced immediately when physically damaged or worn. Design operations thus to avoid permanent use of protective gloves.

Eye protection:
Safety glasses (EN 166)

Skin protection:
Normal chemical work clothing. General protective and hygiene measures Do not eat, drink or smoke during work time. Keep away from foodstuffs and beverages. Wash hands before breaks and after work. Remove soiled or soaked clothing immediately. Wash soiled clothing immediately.

9. Physical and chemical properties

General information
Form: liquid
Colour: amber
Odour: odourless

Important health, safety and environmental information

Changes in physical state
Type: Pourpoint
Value: -9 °C

Flash point
Value: 250 °C
Method: Cleveland open cup
Explosion limits
Upper explosion limit: 4,5 % vol
Lower explosion limit: 0,45 % vol

Density
Value: 0,878 g/cm³
Reference temperature: 15 °C

Viscosity
Type: kinematic
Value: 92 cSt
Reference temperature: 40 °C
Type: kinematic
Value: 10,6 cSt
Reference temperature: 100 °C

Solubility in water
Remarks: insoluble

pH value
Remarks: no data available

10. Stability and reactivity

Conditions to avoid:
Protect from sun. Stable under recommended storage and handling conditions (See section 7).

Materials to avoid:
Oxidizing agents

Hazardous decomposition products:
Carbon monoxide and carbon dioxide

11. Toxicological information

Acute toxicity

Acute oral toxicity
LD50: > 5000 mg/kg
Species: rat
Source: IUCLID

Acute dermal toxicity
LD50: > 2000 mg/kg
Species: rat
Source: IUCLID

Acute inhalational toxicity
Remarks: No data available.

Irritant/corrosive effects

Irritant effect on skin
Species: rabbit
Evaluation: slightly irritant
Source: IUCLID
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**Irritant effect on eyes**

| Species: | rabbit |
| Evaluation: | non-irritant |
| Source: | IUCLID |

**Sensitisation**

| Species: | guinea pig |
| Evaluation: | Non-sensitizing |
| Source: | IUCLID |

**Effects after repeated or prolonged exposition (subacute, subchronic, chronic)**

| Remarks: | No data available. |

**Mutagenicity:**

| No data available. |

**Reproduction toxicity:**

| No data available. |

**Carcinogenicity:**

| No data available. |

**Experience in practice:**

| Inhalation of thermic decomposition products such as vapour, mist or smoke can affect health. |

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**12. Ecological information**

**Ecotoxicity**

**Fish toxicity**

| LC50: | > 5000 mg/l |
| Species: | Oncorhynchus mykiss |
| Duration of exposure: | 96 h |
| Source: | IUCLID |

**Daphnia toxicity**

| EC50: | > 1000 |
| Species: | Daphnia magna |
| Duration of exposure: | 48 h |
| Source: | IUCLID |

**Algae toxicity**

| EC50: | > 1000 mg/l |
| Species: | Scenedesmus subspicatus |
| Duration of exposure: | 96 h |
| Source: | IUCLID |

**Results of PBT and vPvB assessment**

**PBT assessment:**

| The product is not considered to be a PBT. |

**vPvB assessment:**

| The product is not considered to be a vPvB. Other information Do not discharge product unmonitored into the environment. |

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**13. Disposal considerations**

**Product:**

| Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company. |
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Packaging: Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse. Packaging that cannot be cleaned should be disposed of in agreement with the regional waste disposal company.

14. Transport information
Other information: The product is not defined under national/international road, rail, sea and air transport regulations as a hazardous material.

15. Regulatory information
Safety, health and environmental regulations/legislation specific for the substance or mixture
EU regulations
Remarks: Annex I, part 1 + 2: not mentioned. With regard to possibly appropriate decomposition products see Chapter 10.

16. Other information

History
Date of issue: November 22, 2010
Version: A1

Indicates information that has changed from previously issued version.

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e-mail: umco@umco.de

This information is based on our present state of knowledge. However, it should not constitute a guarantee for any specific product properties and shall not establish a legally valid relationship.