Trade name: Huile GS 77

Use:
Lubricating fluid for vacuum pumps

Packing:

<table>
<thead>
<tr>
<th>Volume</th>
<th>Catalog No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 litre</td>
<td>Cat. - No. 711 17 771</td>
</tr>
<tr>
<td>5 litre</td>
<td>Cat. - No. 711 17 774</td>
</tr>
<tr>
<td>2 litre</td>
<td>Cat. - No. 711 17 773</td>
</tr>
<tr>
<td>20 litre</td>
<td>Cat. - No. 711 17 775</td>
</tr>
<tr>
<td>200 litre</td>
<td>Cat. - No. 711 17 779</td>
</tr>
</tbody>
</table>

Identification of the manufacturer/supplier

Address supplier
Oerlikon Leybold Vacuum GmbH
P.O. Box 510760
D-50943 Cologne
Phone    +49-221-347-0
Fax    +49-221-347-1250
Emergency Telephone number: +49-221-347-0

2. Composition/information on ingredients

PREPARATION

Chemical nature:
Petroleum-derived severely refined mineral-base product in which the polycyclic aromatic hydrocarbons (PCA or PAH) content, measured by IP 346, is less than 3%.

<table>
<thead>
<tr>
<th>Substances presenting a health hazard</th>
<th>CAS No.</th>
<th>Content</th>
<th>Symbol(s)</th>
<th>R-phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Di-N-octyl phosphite</td>
<td>1809-14-9</td>
<td>&lt;1 %</td>
<td>Xi,N</td>
<td>R 38-51/53</td>
</tr>
<tr>
<td>Alkylated diphenylamines</td>
<td>68411-46-1</td>
<td>&lt;1 %</td>
<td>N</td>
<td>R 51/53</td>
</tr>
</tbody>
</table>

See section 16 for explanations of R-phrases.

3. Hazards identification

Health effects:
Under normal conditions of use, the product holds no danger of intoxication.

Environmental impact:
Do not discharge this product into the environment.

Physical-chemical hazards:
No specific risk of fire or explosion under normal conditions of use.
4. First aid measures

In case of serious or persistent manifestations, call a doctor or emergency medical care.

**Inhalation:**
Inhalation of heavy concentrations of vapour, fumes or spray, may cause mild irritation of the throat. Transport the person into fresh air, keep warm and allow to rest.

**Ingestion:**
Possible risk of vomiting and diarrhoea. Do not induce vomiting to avoid the risk of aspiration into the respiratory tract. Give nothing to drink.

**Skin contact:**
Immediately remove all soiled or stained clothing. Wash the affected area immediately and repeatedly with soap and water.

**Eye contact:**
Keep eyes open and rinse immediately and repeatedly with water for at least 15 minutes.

**Aspiration:**
If the product is believed to have entered the lungs (in case of vomiting, for example), take the person to hospital for immediate care.

5. Fire fighting measures

**Flash point:**
See heading 9

**Extinguishing media**
suitable: Foam, carbon dioxide (CO2), powder.
not recommended: do not use water jets (stick jets) for extinguishing fire since they could help to spread the flames.

**Specific hazards:**
Incomplete combustion and thermolysis produce gases of varying toxicity such as CO, CO2, various hydrocarbons, aldehydes and soot. These may be highly dangerous if inhaled.

**Protective measures for firefighters:**
Insulated breathing apparatus must be worn in confined premises with heavy concentrations of fumes and gases.
6. Accidental release measures

See sections 8 and 13.

**After spillage/leakage**

On the soil:
Surfaces on which the product has been spilled may become slippery. Do not allow the product to enter sewers or rivers or contaminate the soil. Recover with mechanical means such as pumps and skimmers.

On water:
Floating absorbant material, then mechanical recovery. If the product is spilled in a river or in the sewers, notify the authorities of the possible presence of surface effluent.

**Spill cleanup methods**

Recovery:
Contain and collect the spilled product. Use sand on the surfaces concerned if necessary.
Contain and collect the spilled product with sand or any other inert absorbent material.
In the event of a major spill, inform the relevant authorities if the situation cannot be brought under control rapidly and efficiently.

Elimination:
Dispose of waste in compliance with regulations.
Avoid discharge of the material in a stream or a sewer or cause ground contamination.

7. Handling and storage

**Handling**

**Prevention of user exposure:**
Ventilate extensively if the formation of vapours, fumes, mists or aerosol is a risk. Make all the necessary arrangements in order to reduce exposure risk, notably to products in use or to wastes.
Keep away from combustible substances; keep away from food and beverages.

**Prevention of fire and explosion:**
Empty containers may contain flammable or explosive vapours. There is a fire hazard associated with rags, paper or any other material used to remove spills which become soaked with product.
Avoid accumulation of these: they are to be disposed off safely after use.

**Precautions:**
Avoid static electricity build up with connection to earth. Set up machinery and equipment so as to avoid the risk of accidental spills or splashes onto hot machine parts and electrical contacts (on joint failure, for example).
EG safety data sheet

Trade name: Huile GS 77

Storage

Technical measures:
Make the necessary arrangements to prevent water and soil pollution.

Storage precautions

Suitable:
Store at room temperature, protected against contact with water and moisture, and away from any source of ignition. Keep containers closed when not in use.

To be avoided:
Do not store exposed to the elements.

Incompatible products:
Dangerous reaction with strong oxidising agents.

Packaging materials

Recommended:
Use only hydrocarbon-resistant containers, joints, pipes, etc. Keep in original container if possible.

8. Exposure controls/personal protection

Technical measures:
Use the product in a properly ventilated atmosphere. When working on enclosed place (tanks, reservoirs...), make sure that atmosphere is not suffocating and/or wear recommended equipment.

Occupational exposure limit:

class  

oil mist: 10mg/m³, for 15 minutes  

oil mist: 5mg/m³, for 8 hours

Personal protective equipment

Hand protection:
Impermeable hydrocarbon-proof gloves. recommended material: nitrile, neoprene.

Eye protection:
Goggles, in case of risk of splashing.

Skin and body (other than the hands) protection:
As required, wear a face mask, hydrocarbon-proof clothing, and safety boots (when handling drums). Don’t wear ring, watch or similar thing which will be able to hold the product and may give rise to some skin diseases.

Hygienic work practices:
Avoid prolonged and repeated contact with the skin, especially with used or waste product. Immediately remove all soiled or stained clothing. If the product comes into contact with the skin, wash the affected area immediately and copiously with soap and water. Use no abrasives, solvents or fuels. Do not use cloths stained with the product to dry hands. Don’t put the product-soaked rags in the pockets of working clothes. Do not eat, drink or smoke while handling the product.
9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>Yellow to amber</td>
</tr>
<tr>
<td>Odour</td>
<td>Characteristic for oil</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt; 200 °C (Open cup)</td>
</tr>
<tr>
<td>Density</td>
<td>880 kg/m³ at 15°C</td>
</tr>
<tr>
<td>Température d’auto-inflammation</td>
<td>&gt; 250 °C (ASTM E 659)</td>
</tr>
<tr>
<td>Partition coefficient (log Pow)</td>
<td>Low Pow &gt; 6 at 20 °C</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Kinematic: 68 mm²/s at 40°C</td>
</tr>
</tbody>
</table>

10. Stability and reactivity

Stability:
The product is stable at normal storage, handling and use temperatures.

Conditions to avoid:
Heat (temperatures above flash point), sparks, ignition points, flames, static electricity

Materials to avoid:
Avoid contact with strong oxidizers.

Hazardous decomposition products:
Incomplete combustion and thermolysis produces potentially toxic gases such as CO, CO₂, various hydrocarbons, aldehydes and soot.

11. Toxicological information

Acute toxicity/Local effect

Inhalation, comments:
Risk is improbable under normal conditions of use. Inhalation of high concentrations of vapour or aerosols may cause irritation of the upper respiratory tract.

Skin contact, comments:
Risk is improbable under normal conditions of use.

Ingestion, comments:
In case of ingestion of small quantities, no important effect observed. In case of ingestion of larger amounts: abdominal pain, diarrhea, ...

Chronic toxicity or long-term toxicity

Skin contact:
Characteristic skin affections (oil blisters) may develop following prolonged and repeated exposure through contact with stained clothing.

Sensitization:
To our knowledge, the product does not cause aggravated sensitivity.

Carcinogenicity:
This product is not regarded as carcinogenic.

12. Ecological information
Comments about ecotoxicity:
Experimental data on the finished product are not available. It is considered to present a little danger for aquatic life. No information available for used product.

Mobility

Air:
There is a slow loss by evaporation.

Soil:
Given its physical and chemical characteristics, the product generally shows little mobility in the ground.

Water:
The product is insoluble; it spreads on the surface of the water.

Persistence and degradability:
No experimental information about the finished product. However the "mineral oil" fraction of the new product is intrinsically biodegradable. Some components of the product may not be biodegradable.

13. Disposal considerations

Waste disposal:
Dispose of in a safe manner, in accordance with local regulations. If need be, collection by an authorised waste contractor and regeneration or incineration at an approved installation.

Disposal of contaminated packaging:
Proceed in compliance with the prevailing regulations.

National regulations:

France:
Law No. 75-633 of 15.07.75 amended, relative to the elimination of wastes and the recovery of materials.

Regulations concerning the collection of used oils:
Decree 79-981 of 21.11.79 and rules of 28.01.99 relative to their collection and the conditions for their elimination.
Law No. 88-1261 of 30.12.88 concerning the import, export and transit of wastes.
Decree No. 77-254 of 08.03.77 relative to the regulation for the dumping of oils and lubricants into surface waters.

14. Transport information

Not concerned by the transport regulations below.

Road (ADR)/Rail (RID):
Transport by barge (ADNR):
Marine (IMO-IMDG):
Air (ICAO/IATA):

15. Regulatory information
Not applicable.

Risk phrases:
None

Safety phrases:
None

EU directives:

Social Security code:
Table of occupational illnesses and diseases No. 36

Labor code:

16. Other information

This sheet is in compliance with the standards defined by the directives 91/155/CEE, 93/112/CEE, 2001/58/CE and the article 14 of the directive 1999/45/EC.

Explanations of R-phrases in section 2:
R 38 Irritating to skin.
R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

This safety data sheet serves to complete but not to replace the technical product sheets. The information contained herein is given in good faith and is accurate to the best of knowledge at the date indicated above. It is understood by the user that any use of the product for purposes other than those for which it was designed entails potential risk. The information given herein in no way dispenses the user from knowing and applying all provisions regulating his activity. The user bears sole liability for the precautions required when using the product. The regulatory texts indicated herein are intended to aid the user to fulfil his obligations. This list is not to be considered complete and exhaustive. It is the user's responsibility to ensure that he is subject to no other obligations than those mentioned.

Oerlikon Leybold Vacuum GmbH is not the manufacturer. The above information is based on the information by our suppliers. We ourselves have not checked this information. The last update of the safety data sheets was done from the supplier on 2004-07-09.

Information provided by:
Phone +33-475-82-3326
Fax +33-475-82-9269