

Safety Data Sheet

Product name : LUNARIA SK 100 Page : 1/6
SDS n° :30443-33 Version :1.01 Version of :2006-12-13
This sheet supersedes the one dated :2003-02-14

PRODUCT LABELS

LABELLING (standard or EU): Concerned
R-phrases : R-53 May cause long-term adverse effects in aquatic environments.
S-phrases : S-61 Avoid release to the environment. Refer to special instructions/Safety Data Sheets.
TRANSPORT LABELLING: Not applicable.

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY UNDERTAKING

Name of the product : LUNARIA SK 100
Code No. : 1L5
Product application : Compressor oil
Supplier : TOTAL LUBRIFIANTS
Le Diamant B
16, rue de la République
92922 Paris La Défense - France
Tel: +33 (0)1 41 35 40 00
Fax: +33 (0)1 41 35 84 71

See local details at end of sheet :

2. HAZARDS IDENTIFICATION

Health effects : This product does not present a danger of intoxication.
No specific symptoms known.
Environmental impact : Do not discharge this product into the environment.
May cause long-term adverse effects in the aquatic environment.
Physico-chemical hazards : No specific risk of fire or explosion under normal conditions of use

3. COMPOSITION/INFORMATION ON INGREDIENTS

PREPARATION

Chemical nature : The product is made from synthetic base oils (alkylbenzene).

| Substances presenting a health hazard | EC No. | CAS No. | Content | Symbol(s) | R-phrases |
|---|-----------|-------------|---------|-----------|-----------|
| Long chain alkylbenzenes | | | <97 % | - | R-53 |
| Alkylated diphenylamines | 270-128-1 | 68411-46-1 | <1 % | N | R-51/53 |
| Benzenepropanoic acid, 3,5-bis (1,1-dimethyl-ethyl)-4-hydroxy-C7-C9 branched Alkyl ester | | 125643-61-0 | <1 % | N | R-51/53 |

See section 16 for explanations of R-phrases :

4. FIRST AID MEASURES

IN CASE OF SERIOUS OR PERSISTENT CONDITIONS, 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.



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| 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, as this may help the spread of flames.

Specific hazards :

Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot. These may be highly dangerous if inhaled.
Vapours can build explosive mixtures with air.
Vapours are heavier than air and may spread on the ground to sources of ignition.

Protective measures for firefighters :

Insulated breathing apparatus must be worn in confined premises with heavy concentrations of fumes and gases.

Other :

All combustion residues and contaminated water from fire-fighting should be disposed of according to local regulations.

6. ACCIDENTAL RELEASE MEASURES

See sections 8 and 13.

Personal protection :

Ensure good ventilation.
Remove sources of ignition. Do not smoke.

After spillage / leakage :

- On land:
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 spilt into rivers or sewers, notify the authorities of the possible presence of surface effluent.

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.

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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).

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 oxidizing 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 :

- . oil mist : 10mg/m³, for 15 minutes
- . oil mist : 5mg/m³, for 8 hours

Hand protection : Impermeable hydrocarbon-proof gloves.
recommended material: nitrile , neoprene.
The break through times of the same type of glove of different manufacturers can be very different - even if the layer thickness is similar. Therefore the break through times have to be found out from the manufacturer of the protective gloves themselves.
The demands on the gloves are determined by the conditions in practice (e.g. multiple use, mechanical load, temperature, strength and duration of exposition).
Before choosing suitable gloves, it is recommended that the user tests the gloves.

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 rings, watches or anything similar which can retain the product and may give rise to skin conditions.

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.
Do not use abrasives, solvents or fuels.
Do not dry hands with rags that have been contaminated with product.
Do not put product contaminated rags into workwear pockets.
Do not eat, drink or smoke whilst handling the product.

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9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|--|--|
| Appearance : | Liquid |
| Colour : | Yellow. |
| Odour : | Characteristic |
| Density/specific gravity : | 873 kg/m ³ kg/m ³ Temperature (°C) 15 |
| Flash point : | > 190 °C (ASTM D 93) |
| Température d'auto-inflammation : | > 250 °C (ASTM E 659) |
| Comments on autoignition temperature : | This temperature may be significantly lower under particular conditions (slow oxidation on finely divided materials...). |
| Comments on explosivity : | The lower flammable limit of oil mist is reached at concentrations in the range of 45 g/m ³ . Pour point: < -24 °C (ASTM D 97) |
| Solubility : | - in water : Insoluble and immiscible. - in organic solvents : Soluble in many common solvents. |
| Partition coefficient (log Pow) : | Log Pow = Log Pow > 6 Temperature (°C) (20°C) |
| Viscosity : | 98 mm ² /s à 40°C |

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 decomp. products : | Incomplete combustion and thermolysis produces potentially toxic gases such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot. |

11. TOXICOLOGICAL INFORMATION

Acute toxicity / Local effect :

| | |
|-------------------------|--|
| Inhalation, comments: | - Inhalation : Not classified according to the criteria of classification in force. Inhalation of high concentrations of vapour or aerosols may cause irritation of the upper respiratory tract. |
| Skin contact, comments: | - Contact with skin : Not classified according to the criteria of classification in force. |
| Ingestion, comments: | Swallowing the product can cause serious gastric lesions. 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 :

| | |
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| Skin contact : | Characteristic skin affections (oil blisters) may develop following prolonged and repeated exposure through contact with stained clothing |
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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.
no information available for used product
May cause long-term adverse effects to the aquatic environment.

Mobility :
- Air:
there is a slow loss by evaporation.
- Land:
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.

Waste class : The waste classification is dependant on the composition of the product at the time of disposal.
The waste classification mentioned here represents only a recommendation. The waste producer is responsible for the correct specification of the waste. The specification of the waste classification should be in arrangement with the authorised waste disposal company.
Industrial waste number EU
13 02 06

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

14. TRANSPORT INFORMATION

Not concerned by the transport regulations below.

Road (ADR) / Rail (RID) :

Class : Not restricted for transport.

Transport by barge (ADNR) :

Marine (IMO-IMDG) :

Air (ICAO/IATA) :

15. REGULATORY INFORMATION

Risk phrases : R-53 May cause long-term adverse effects in aquatic environments.

Safety phrases : S-61 Avoid release to the environment. Refer to special instructions/Safety Data Sheets.



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EU directives : Hazardous preparations directive 1999/45/EC modified (Directive 2001/60/EC).
This product fulfills the requirements of the European directives :
76/769/EEC
2000/53/EC
2002/95/EC
2002/96/EC
2003/11/EC

Social Security code : - Art. L 461-6, Art. D.461-1, annexe A, n° 601
Table of occupational illnesses and diseases No. 36

Labor code : - Art. R 241-50, decree of 07.11.1977 (special medical surveillance).

16. OTHER INFORMATION

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

Revision date: 2006-12-13

Supersedes the data sheet of: 2003-02-14

* Information revised since the previous version of the SDS :

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.