

ENOC LUBRICANTS

Material Safety Data Sheet

AXIS 46

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Product code: 240002

Issue : 4

Date: 25/07/2011

Invalidates and replaces the issue of : 19/01/1998

PRODUCT LABELS

LABELLING (standard or EU) Not applicable

TRANSPORT LABELLING : Not applicable

1. Product and company identification

Commercial name: AXIS 46
Product application: Hydraulic transmission oil
Company name: ENOC International Sales LLC
Address: Sheikh Rashid Road
P. O. Box 6442
DUBAI, UAE
Emergency number of the company : 00 971 4 3374400
Fax: 00 971 4 3134602

2. Composition / information on ingredients

COMPOSITION Blended with mineral base oil SN 150 & SN 500 CAS 64742-65-0 at 99.42% with additive concentrate at 0.58%.
Chemical nature: Petroleum-derived severely refined mineral-base product
in which the polycyclic aromatic hydrocarbons (PCA or PAH) content, measured by IP 346, is
above 3%
Substances contributing to hazards : None to our knowledge, in normal use

3. Hazard identification

- Adverse human health effects : Under normal conditions of use, the product holds no danger of intoxication
- Environmental effects : Don't dispose of this product into the environment
- physical and chemical hazards : No specific risk of fire or explosion under normal conditions of use

4. First-aid measures

IN CASE OF SERIOUS MANIFESTATIONS, CALL IN A DOCTOR OR EMERGENCY MEDICAL CARE

Route of exposure :

- 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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|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| - Contact with the skin : | If the skin is exposed to high-pressure spray, the product may enter the human organism. In all such cases the affected person must be taken to hospital, even if no sign of injury can be detected
Immediately remove all soiled or stained clothing
Wash the affected area immediately and repeatedly with soap and water. |
| - Contact with the eyes : | Keep eyes open and rinse immediately and repeatedly with water for at least 15 minutes |
| - 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 |
| - 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 |
| Fire extinguishers: | |
| - suitable : | Foam, carbon dioxide (CO ₂), powder |
| - not suitable : | do not use water jets (stick jets) for extinguishing fire since they could help to spread the flames. |
| Firefighter protection: | An insulated breathing apparatus must be worn in confined premises with heavy concentrations of fumes and gases |

6. Accidental release measures

- | | |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| See also heading 8 and 13 | |
| After spillage / leakage | |
| - on soil | Surfaces on which the product has been spilled may become slippery
Avoid discharge of the material in a stream or a sewer or cause ground contamination.
recovery by physical means
Contain and collect the spilled product with sand or any other inert material.
In the event of a major spill, inform the competent authorities if the situation cannot be brought under control rapidly and efficiently |
| - on water | Use floating absorbent material to be removed mechanically
If the material has been discharged into a stream or a sewer, inform the authorities of the possible presence of floating materials |

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7. Handling and storage

HANDLING

- Technical measures :

. prevention of user exposure

Provide adequate ventilation in case of the potential formation of vapour, fumes, mist or spray

Take all measures to reduce the risk of exposure, in particular to used or waste product

Keep away from flammable material; 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 accumulate 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)

Prevent oil leaks in pressure circuits resulting in a fine inflammable spray (the flammability limit for oil mist is depressed when concentrations of about 45 g/m³ are reached)

- Safe handling advice :

Avoid contact with strong oxidizing agents

Use only hydrocarbon-resistant containers, joints, pipes etc...

STORAGE

- Technical measures :

Make the necessary arrangements and take all measures to prevent water and ground pollution

- Storage conditions :

. 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

Otherwise, transfer all indications on the regulatory label to the new container

8. Exposure controls / personal protection

Engineering measures:

Use the product in well-ventilated premises

When working on enclosed place (tanks, reservoirs...), make sure that atmosphere is not suffocating and/or wear recommend equipment

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- Control parameters:

. Occupational exposure limit

. 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 splashing

- Skin and body different hand 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

Industrial hygiene

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 repeatedly with soap and water

Use no abrasives, solvents or petroleum spirit

Do not use cloths stained with the product to dry hands

Dont 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

Appearance:

- Physical state:

Liquid

- Colour:

Yellow to amber

Odour:

Characteristic odour of oil

pH:

Not applicable

Specific temperatures

of change in state

Flash point:

$\geq 200^{\circ}\text{C}$ (ISO 2592)

Auto-ignition temperature:

$> 250^{\circ}\text{C}$ (ASTM E 659)

This temperature may be significantly lower under particular conditions (oxidation on high surface areas)

Explosion limits:

Not applicable

Density:

About 881 kg/m3 at 15°C

Solubility:

- in water:

Insoluble and immiscible

- in organic solvents:

Soluble in many common solvents

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- Viscosity: Kinematic viscosity at 40°C: about 46 mm²/s
Log P n-octanol / water at 20°C mineral oil > 6

10. Stability and reactivity

Stability: The product is stable under normal temperatures of storage, handling and use
Dangerous reactions: Not dangerous reaction known under normal conditions of use, to refer to the technical notice
- Conditions to avoid: Heat (temperatures above flash point), sparks, ignition points, flames, static electricity
- Materials to avoid: Avoid contact with strong oxidizing
Dangerous decomposition products: Incomplete combustion and thermolysis produce more or less toxic gases such as CO, CO₂, various hydrocarbons, aldehydes and soot

11. Toxicological information

ACUTE TOXICITY/LOCAL EFFECTS

- Inhalation: Risk is improbable under normal conditions of use
Inhalation of important concentration of vapour or aerosols may cause irritation of the upper respiratory tract.
- Contact with the skin: Risk is improbable under normal conditions of use
If the skin is exposed to high-pressure spray, the product may enter the human organism. In all such cases the affected person must be taken to hospital, even if no sign of injury can be detected
- Ingestion: In case of ingestion of small quantities, no important effect observed. in case of ingestion of larger amounts: abdominal pain, diarrhoea, ...

SENSITIZATION

To our knowledge, the product dont induce sensitization

CHRONIC TOXICITY OR LONG-TERM TOXICITY

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

12. Ecological information

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

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Persistence and degradability:

Experimental data on the finished product are not available

However, the "mineral oil" portion of the virgin product is intrinsically biodegradable.

Particular ingredients may not be biodegradable

Ecotoxicity:

The virgin product is considered to present no danger for land-growing organisms.

It is considered to present a little danger for aquatic life.

no information available for used product

13. Disposal considerations

Waste disposal :

Dispose in a safe manner in accordance with local/national regulations

If need be, collection by an authorized waste contractor and regeneration or incineration in an approved installation

Used packaging disposal :

Conform to the regulation in effect

Industrial waste number EU :

13-01-06 (hydraulic oils containing only mineral oil)

14. Transport information

UN Number :

unregulated

Road (ADR) / Rail (RID)/ River (ADNR)

Not restricted for transport.

Marine (IMO-IMDG)

Not restricted for transport.

Airline (ICAO / IATA)

Not restricted for transport

15. Regulatory information

EUROPEAN REGULATIONS

- EC labelling

- Symbol(s)

None

- R Phrase(s)

None

- S Phrase(s)

None

16. Other information

This data sheet conforms to standards defined by directive 93/112/EEC

Date of current version:

31/10/2000

Supersedes previous Safety Data Sheet of:

19/01/1998

"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 our knowledge at the date indicated hereabove.

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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 or her 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 fulfill 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."

End of document.

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