



ABU DHABI NATIONAL OIL COMPANY FOR DISTRIBUTION

PRODUCT HEALTH & SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION

Product : **ADNOC HYDRAULIC OIL H 46**

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Company Information :

Abu Dhabi National Oil Company For Distribution
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2. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients present at or above 0.1 Wt% (classified as toxic or very toxic) or 1 wt% (classified as harmful , irritant or corrosive).

<u>Hazardous Ingredient</u>	<u>Approximate Concentration</u>
None	

3. HAZARD IDENTIFICATION

This product consists of highly refined base oils with additives. It is of low oral and dermal toxicity and Under normal conditions of use should present no significant health hazards. However, in common with most mineral oils, prolonged and repeated skin contact may cause dermatitis. Handling precautions should be strictly observed.

4. FIRST AID:

INHALATION :

At ambient/normal handling temperature, inhalation of vapors is normally not a problem. If overexposed to oil mist, remove from further exposure. Administer artificial respiration if breathing is irregular or has stopped. Get prompt medical attention.

SKIN CONTACT :

Wash thoroughly with plenty of water, using soap if available. Remove contaminated clothing. If irritation persists, get medical attention.

EYE CONTACT :

Rinse immediately with plenty of water until irritation subsides. If irritation persists, obtain medical advice.

INGESTION: If swallowed , DO NOT induce vomiting , keep at rest and call a physician.



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5. FIRE – FIGHTING MEASURES

EXTINGUISHING MEDIA:

Foam, dry chemical powder, carbon dioxide.

FIRE AND EXPLOSION HAZARDS:

Combustible material, low hazard. The product can form flammable mixtures or can burn only on heating above the flash point. However, minor contamination by hydrocarbons of higher volatility may increase the hazard.

SPECIAL FIRE-FIGHTING PROCEDURES:

Water fog or spray, to cool fire-exposed surfaces (e.g. containers) and to protect personnel, should only be used by personnel trained in fire fighting.

Cut off “fuel”, depending on circumstances, either allow the fire to burn out under controlled conditions or use foam or dry chemical powder to extinguish the fire.

Respiratory and eye protections required for fire fighting personnel exposed to fumes or smoke.

HAZARDOUS COMBUSTION PRODUCTS:

Smoke, oxides of sulphur, phosphorus and nitrogen, and carbon monoxide in the event of incomplete combustion.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS : See Section 8.

LAND SPILL :

Shut off source taking normal safety precautions. Prevent liquid from entering sewers, water courses or low lying areas, advise the relevant authorities if it has, or if it contaminates soil/vegetation. Take measures to minimize the effects on ground water.

Recover by skimming or pumping using explosion proof equipment, or contain spilled liquid with booms, sand, or other suitable absorbent and remove mechanically into containers.

If necessary, dispose of adsorbed residues as directed in Section 13.

WATER SPILL:

Confine the spill immediately with booms. Warn other shipping. Notify port and other relevant authorities. Remove from the surface by skimming or with suitable absorbents. Disperse the residue in unconfined waters, if permitted by local authorities and environmental agencies.

7. HANDLING AND STORAGE

Store the product in cool, well ventilated surroundings, well away from sources of ignition.

Provide suitable mechanical equipment for the safe handling of drums and heavy packages.

Electrical equipment and fittings must comply with local regulations regarding fire prevention with this class of product.



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7. HANDLING AND STORAGE (continued)

Load/Unload °C : (Ambient to 40 °C)
Storage °C : (Ambient to 40 °C)

SPECIAL PRECAUTIONS :

Keep containers closed when not in use.
Prevent small spills and leakages to avoid slip hazard.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMIT:

5 mg/m³ for oil mists (TWA, 8h – workday) recommended based upon the ACGIH TLV (analysis according to US NIOSH method 5026, NIOSH manual of analytical methods , 3rd ed..).

PERSONAL PROTECTION:

In open systems where contact is likely, wear safety goggles, chemical- resistant overalls, and chemically impervious gloves.

Where only incidental contact is likely, wear safety glasses with side shields. No other special precautions are necessary provided skin/eye contact is avoided.

When concentrations in air may exceed the occupational exposure limit, and where engineering, work practices, or other means of exposure reductions are not adequate, approved respirators may be required.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance/Odour	: Clear amber liquid, mild petroleum odour
Density @ 15°C , Kg/ltr	: 0.870
Kin. Viscosity @ 40 °C , cSt	: 46
Boiling Point /Range , °C	: Data not available
Vapour Pressure, kPa	: 0.01
Vapour Density @ 1 Bar (air=1)	: >12
Evaporation Rate (n-butyl acetate=1)	: <0.01
Solubility in water @20 °C	: Negligible
pH	: Not Applicable
Flash Point, COC , °C	: >210
Auto ignition Temperature , °C	: Data not available
Partition co-efficient (n-octanol/water)	: Data not available
Flammability limits in Air , % by Vol	: LEL : 1.0 UEL: 6.0 (approx.)

10. STABILITY AND REACTIVITY

STABILITY (Thermal, Light, etc) : Stable

CONDITIONS TO AVOID : Keep away from heat sources, open flames and other sources.



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10. STABILITY AND REACTIVITY (continued)

INCOMPATIBLE MATERIALS:

Avoid contact with strong oxidants such as liquid chlorine and concentrated oxygen.

HAZARDOUS DECOMPOSITION PRODUCTS:

Product does not decompose at ambient temperature.

11. TOXICOLOGICAL INFORMATION

EFFECTS OF OVER EXPOSURE:

INHALATION:

Negligible hazard at ambient / normal handling temperatures.

Elevated temperatures or mechanical action may form vapours, mists, or fumes which may be irritating to the eyes, nose, throat and lungs.

Avoid breathing vapours, mists or fumes.

SKIN CONTACT:

Low order of acute toxicity.

Prolonged or repeated contact may lead to mild skin irritation.

EYE CONTACT:

Slightly irritating, but does not injure eye tissues.

INGESTION:

Low order of acute / systemic toxicity.

CHRONIC:

The base oil components of this product have shown no carcinogenic activity in experimental animals (long – term repeated skin painting tests).

TOXICITY DATA:

ACUTE:

No test data are available for the complete formulated product. The potential health hazards described were therefore derived from what is generally known of the toxicity of the base oils and the additives, taking into account the concentrations at which they are present. The general effects of mineral oils of this type are well known and are described in numerous publications including CONCAWE report 5/87 "Health Aspects of Lubricants".

CHRONIC:

The base oils for this product have been subjected to a lifetime skin painting bioassay using a standard Exxon test protocol; there was no evidence of carcinogenicity.



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12. ECOLOGICAL INFORMATION

In the absence of specific environmental data for this product, this assessment is based on information for general hydrocarbon components found in lubricant mineral oils. Lubricant mineral oils immediately following a release into the environment, will remain largely on the soil surface, and in water will remain largely on the water surface. Based on chemical/physical information from the literature for this product category, no harmful effects to terrestrial or aquatic habitats would be expected. This product is expected to be resistant to biodegradation and to persist in the environment. This product may contain additives for which no environmental data is available. Hence, the above assessment concerns the base oil (s) only.

13. DISPOSAL CONSIDERATIONS

Collect and dispose of waste product at an authorized disposal facility, in conformance with national and local regulations, and in accordance with EEC Directives on the disposal of waste oil.

14. TRANSPORT INFORMATION

USUAL SHIPPING CONTAINERS :

Rail Cars, tank trucks, and drums.

TRANSPORT TEMPERATURE °C : Ambient to 40 °C

15. REGULATORY INFORMATION

EC DANGEROUS SUBSTANCES/PREPARATIONS CLASSIFICATION : Not Regulated.

Refer to your national legislation implementing the EC Directive 91/155/EC

16. OTHER INFORMATION

PRODUCT TYPE/USES :

Premium hydraulic oil with special antiwear characteristics.

SOURCE OF KEY DATA:

The recommendations presented in this Health and Safety data sheet were compiled from actual test data (when available), comparison with similar products, component information from suppliers and from recognized codes of good practice. The information and recommendations contained herein are, to the best of ADNOC's knowledge and belief, accurate and reliable as of the date issued, but are offered without guarantee or warranty. They relate to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Conditions of use of the material is under the control of the user, therefore it is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use.