

HEALTH & SAFETY INFORMATION

MINERAL HYDRAULIC OILS

PRODUCT GROUP: 4

1. PRODUCT DESCRIPTION

This group covers hydraulic lubricants based on highly refined mineral oil (with additives).

2. COMPOSITION INFORMATION

These products are based on highly refined mineral oils (generally more than 90%), with additives.

3. NATURE OF HAZARDS

Mineral Hydraulic Oils are generally low hazard products. They may cause slight temporary irritation if splashed in the eye. They may cause slight skin irritation following frequent or prolonged skin contact.

4. PHYSICAL PROPERTIES

Appearance/State (20°C)	Clear Liquid
Odour	Mild
Specific Gravity (15.6°C)	Generally in the range 0.85 - 0.96
Viscosity @ 40°C (mm ² /sec)	Depends on the viscosity grade classification
Acidity/Alkalinity	Not applicable
pH (Product)	Not applicable
pH Usage Concentration	Not applicable immiscible with water.
Freezing/Melting Point (°C)	<0°C Pour point depends on grade classification
Boiling Point/Range (°C)	>150°C

5. PHYSICAL PROPERTIES

Vapour Pressure @ 20°C	<0.01 mm Hg
Vapour Density (Air = 1)	Not applicable
Evaporation Rate	Not applicable
Miscibility with water	Immiscible
Miscibility with solvents	Miscible with petroleum solvents

6. FIRE DATA

Flash Point (°C) and Method	High flash point (>150°C) products (closed cup)
Auto- ignition Temperature	>200
Flammability Limits	1.5 - 6 (volume % in air) Combustion products consist mainly of oxides, carbon vapour, with unidentified organic compounds.
Special Fire/Explosion	Large surfaces areas exposed to air/oxygen (for example oil-soaked rags, paper or absorbed spillage's)



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The content of this Data Sheet is given in good faith but without warranty.

New Era Fuels Ltd

4 Astra Centre, West Road, Off Edinburgh Way, Harlow, Essex, CM20 2BN

Tel No: +44(0)1279 42 57 57 Fax No: +44(0)1279 42 57 58

www.newerafuels.co.uk



may be easily ignited and these should be cleared up at once.

Special Fire-Fighting

Fire-fighters should enter area procedures wearing self-contained breathing apparatus. Do not spray directly into storage container due to boil over danger.

Extinguishing Agents

Foam, dry chemical powder, carbon dioxide, halon extinguishers are suitable. Do not use water jets.

7. STORAGE INFORMATION

Storage Temperature (°C)

0 - 40°C

Storage Precautions

No special requirements avoid elevated temperatures

Suitable Materials/Coatings

Most common metals are suitable for storage.

Unsuitable Materials/Coatings

May soften some rubbers

8. REACTIVITY AND THERMAL DECOMPOSITION DATA

Stability

Stable material

Hazardous Polymerization

Will not occur

Known Dangerous Reactions

None known

Reaction with water

None

Material to Avoid

Strong oxidising agents

9. REACTIVITY AND THERMAL DECOMPOSITION DATA

Conditions to Avoid

Extreme temperatures

Decomposition Temperature °C

>100°C

Dangerous Decomposition

Significant concentrations of hazardous decomposition

Products

Products are not expected.

10. SPILLAGE AND DISPOSAL INFORMATION

Steps To Be Taken If Material Is Released or Spilled

Soak liquid in absorbent material and collect solids in container. Wash down floor area as spillage's can be slippery.

Waste Disposal Methods

Land dumps at appropriate site or incinerate in accordance with local regulations. Some use lubricating oils be reclaimed by specialised contractors. Specific Disposal Restrictions There may be local authority on mineral oil.

Environmental Information/Advice

Avoid contamination of drains, sewers and water courses.

Biodegradability

No data

Aquatic Toxicity

No data

Chemical Oxygen Demand

No data

11. TOXICOLOGICAL/OCCUPATIONAL HEALTH DATA

Oral LD50 (mg/kg bodyweight)

>5000 (rats expected LD50)



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Dermal LD50 (mg/kg bodyweight)
Inhalation LC50 (mg/litre)
Occupational Exposure Limits

>3000 (rabbits expected LD50)
No data
5mg/m³ (Oil - Mists).

12. EFFECTS OF OVER EXPOSURE

Eye Contact

Contact may cause temporary irritation, smarting but tissue damaged is not expected.

Skin Contact

These products are generally non-irritant in incidental contact with the skin. However, excessive or prolonged skin contact with mineral oil products can give rise to oil blockages of hair follicles and skin pores, inflammation and slight irritation.

13. EFFECTS OF OVER EXPOSURE

Inhalation

Harmful concentration of vapour does not normally arise except where high temperatures or atomising systems are involved. Under such circumstances, inhalation in high enough concentration may cause irritation of lungs and possible respiratory damage.

Ingestion

Swallowing can cause nausea, irritation of mouth and digestive tract, and abdominal pain. Aspiration into the lungs (direct or during subsequent vomiting) can cause local irritation of lung tissue which may give rise to a chemically induced pneumonia - children are more susceptible than adults.

Carcinogenicity

No carcinogenic effects are normally associated with these types of products they are manufactured from highly refined base stocks to minimise any risk, and in accordance with current petroleum industry, UKPIA, CONCAWE, and IARC guidance are not classified as carcinogenic materials.

Other Chronic Toxic Effects

There are no reports of long-term adverse toxic effects in man attributable to the use of this type of product.

14. RECOMMENDED FIRST AID

Eye Contact

Flush with plenty of clean water for at least 15 minutes. If irritation persists, obtain urgent medical attention.

Skin Contact

Wash with soap. Remove heavily contaminated clothing. The use of a skin reconditioning cream can be beneficial. Where skin rashes occur as a result of excessive contact, medical advice should be obtained.

Inhalation

In the event of discomforting effects produced by over exposure, remove to fresh air. If effects persist obtain medical attention. (Note: whilst the recommended exposure limit for oil mists is 5mg/m³, it is generally



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advisable to control exposures below 2 - 3 mg/m³ in order to minimise nuisance and discomfort complaints).

Ingestion

Milk or water to drink may be beneficial. Do not induce vomiting main hazard is aspiration into the lungs during or following ingestion, children being more susceptible than adults. If this occurs (e.g. during vomiting), send to hospital immediately.

Notes for Doctors

Treat symptomatically, aspiration may cause severe pneumonitis requiring antibiotic and corticosteroid therapy.

15. SPECIAL PROTECTION INFORMATION

Respiratory Protection
Eye/Face Protection
Hand Protection
Body Protection
Other Protection Information
Ventilation Type
Additional Handling

Not normally required
Chemical eye goggles are suitable
PVC/Synthetic rubber gloves are usually suitable.
Normal clean industrial overalls are suitable.
May need local extraction if mists are generated.
General ventilation
Use away from heat and ignition sources - No Smoking.
Avoid prolonged skin contact. The use of suitable skin barrier can be beneficial. Avoid breathing mists or vapours.

16. PACKAGING, LABELLING AND TRANSPORT CLASSIFICATIONS

UK/EEC Supply Classification
Risk Phrases
Safety Phrases

Not classified

UN Classification/Shipping Name
Road - ADR Classification
UK 'PG' Packages Goods Regulations

Not classified
Not classified
Note: These products are not classified as being hazardous for transportation.

17. ADDITIONAL HANDLING

Note: During some service conditions (for example, those involving high fluid temperatures or where thermal cracking occurs), mineral oil products may sometimes become contaminated or degraded during use and this may adversely affect the health characteristics.

Note: Information on this data sheet relates only to the product designated, and may not be valid when the product is used in combination with other materials or in any process. It is the responsibility of the user to decide whether the information is suitable and complete for the user's particular use. All physical data and characteristics are given to enable the user to design suitable control and other health and safety measures. They are presented as guidance for this purpose only, and may NOT necessarily represent typical or specification values.
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