



Material Safety Data Sheet (MSDS)

Original Date: 2016/07/25

Section 1: Identification

Product Identifier:	Hydraulic HD Zinc Free ISO 32, ISO 46, ISO 68 & ISO 100
Product Description:	Hydrocarbon base oil and performance agents
Internal Identification:	56/3002ZF/210 BS/002ZF/099 56/3004ZF/099 56/3018ZF/210
Identified uses:	Zinc free anti-wear hydraulic oil

Section 2: Hazards Identification

Hazardous Designation:	When used for its intended purposes this mixture is not classified as hazardous.
Physical & Chemical Hazards:	Not classified
Human Health:	Not classified
Environment:	Do not discard this product into the environment.
Hazardous Ingredients:	None
Hazard Pictograms:	None required
Precautionary Statements	
General:	Read label before use. Keep out of reach of children.

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Note: This product should not be used for any other purpose than the intended use described in Section 1 without expert advice.

Section 3: Composition/Information on Ingredients

Composition: Mixture
Ingredient Name: Base oil
CAS #: 64741-88-4
Percentage: 75 – 85%
Classification: Not Classified

Ingredient Name: Base oil
CAS #: 64742-01-4
Percentage: 15 - 25%
Classification: Not Classified

Ingredient Name: Performance additive
CAS #: Varies
Percentage: 05 – 1.5%
Classification: Not Classified

Section 4: First Aid Measures

General Information: Seek medical attention if any discomfort continues.
Inhalation: Remove from further exposure. For those providing assistance avoid exposure to yourself or others.
Skin Contact: Remove contaminated clothing. Wash skin thoroughly with soap and water or use a proprietary skin cleaner. Do not use solvents or thinners.
Eye Contact: Contact lenses should be removed. Flush with clean, fresh water for at least 10 minutes while holding eyelids apart. Seek medical advice.
Ingestion: If accidentally swallowed obtain immediate medical attention. Do not induce vomiting.

Section 5: Fire Fighting Measures

Fire Fighting Instructions: Evacuate the area through the closest exit points and gather at the nearest assembly point indicated by the Assembly Point sign. No action shall be taken involving the personal risk of employees.

Appropriate Extinguishing Methods: Use water fog, foam or carbon dioxide (CO₂).

Unsuitable Extinguishing Method: Do not use water jets as an extinguisher as this will spread the fire.

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Special Hazards Arising from the Mixture

Hazardous Combustion Products: Smoke, Fume, Aldehydes, Sulphur Oxides, Carbon Oxides and incomplete combustion products.

Explosion Hazards: Non-explosive in the presence of the following materials or conditions: open flames, sparks and static discharge, heat, shocks and mechanical impacts and oxidizing materials. No explosion hazards noted.

Protective Clothing: Fire fighters should wear appropriate equipment and self-contained breathing apparatus (SCBA) with a full face-piece.

Environmental Precautions: Prevent run-off from fire control or dilution from entering drains.

Secondary Disaster Prevention: Heat from the fire can cause the surrounding objects (drums, bottles, etc.) to heat up and possibly result in bursting. If possible remove surrounding objects that may be affected by the heat of the fire.

Section 6: Accidental Release Measures

Environmental Precautions: The product cannot be disposed of through the process of biodegrading. Contain the spillage with sand or oil booms. The product is insoluble in water and will spread on the water's surface, therefore ensure to avoid drains. Prevent spill from entering drains and water sources.

Personal Precautions: Keep unnecessary and unprotected personnel from entering the area. Do not touch or walk through the spillage. Be aware of slippery floors and surfaces. Remove all sources of ignition in the vicinity of the spill.

Methods & Materials for Containment & Cleaning Up:

- a. When dealing with a spillage first contain the spillage with sand or oil booms.
- b. Place dust masks on.
- c. Throw peat absorbent (non-combustible) over the contained spillage. Ensure all the oil is absorbed.
- d. Using the spark proof spade shovel the contaminated absorbent into the heavy duty recovery bags.
- e. Once a bag is full seal it with the bag ties and place in the dedicated wheelie drum.
- f. Clean the surface with a detergent, avoid the use of solvents.

Refer to section 13 for Disposal

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Section 7: Handling and Storage

Precautions for Safe Handling:	Avoid spills. Always remove oil with soap and water or skin cleaning agent, do not use organic solvents. Do not use oil-contaminated clothing or shoes. Do not ingest or inhale the vapour of the product. Use only with adequate ventilation or wear an appropriate respirator when ventilation is inadequate. Keep out of reach of children.
Storage and Incompatibilities:	Store away from direct sunlight in a dry, cool well ventilated area. Keep the container tightly sealed and upright. Containers that have already been opened must be carefully resealed and kept upright to prevent leakage. Keep away from incompatibilities such as oxidizing agents.

Section 8: Exposure Controls/Personal Protection

Exposure Limits:	Base oil long term exposure limit (8 –hour TWA): ACGIH 5 mg/m ³
Hand Protection:	The correct choice of gloves should be chosen in consultation with the supplier after a full assessment of the working conditions has been completed.
Eye Protection:	Avoid contact with eyes. Safety goggles with side shields are recommended.
Skin & Body Protection:	Avoid contact with skin and clothing. Wear suitable hydrocarbon-proof protective clothing and safety boots.
Respiratory Protection:	Use in an adequately ventilated space. Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit.
General Protection:	Barrier creams are not suitable for physical protection.

Section 9: Physical and Chemical Properties

Form:	Liquid
Colour:	Light straw
Odour:	Oily
Odour Threshold:	N/D
Flash Point:	> 200°C
Vapour Pressure:	N/A
Density @ 25°C	0.886 (g/cm ³)
Viscosity @ 40°C	32, 46, 68, 100 (mm ² /s)
PH	N/A
Lower Explosion Limit:	N/A

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Upper Explosion Limit:	N/A
Solubility:	Insoluble in water. Soluble in organic solvents.
Initial Boiling Point & Range:	>320°C @ 101.3 kPa
Auto-ignition Temperature:	>350°C
Decomposition Temperature:	N/D
Explosive Properties:	Not considered to be explosive.
Partition Coefficient:	N/A
Other Flammability:	The product is not flammable but on excessive heating may become combustible.
Volatile Organic Compound:	The product is a complex mixture, the majority of which would not be classified as a VOC, however it cannot be discounted that trace levels of VOC's may be present.

N/A – Not Applicable

N/D – Not Determined

Section 10: Stability and Reactivity

Stability:	The product is stable if handled and stored as described in Section 7.
Chemical Stability:	Stable at ambient temperatures and when used as recommend in Section 1.
Possibility of Hazardous Reactions:	Unlikely to occur.
Conditions to Avoid:	Avoid heat, flames and possible sources of ignition.
Incompatible Materials:	Avoid strong acids and strong oxidizing agents.
Hazardous Decomposition Products:	Thermal decomposition or combustion may liberate carbon oxides, smoke, sulphur oxides and other toxic gases and vapours. Under normal conditions of storage and use hazardous decomposition products should not be produced.

Section 11: Toxicological Information

Acute Toxicity (Ingested):	Not expected to be highly toxic based on information of ingredients.
Acute Toxicity (Skin):	Not expected to be highly toxic based on information of ingredients.
Acute Toxicity (Inhalation):	N/D
Eye Damage/Irritation:	May cause mild discomfort to eyes for a short period.
Respiratory Sensitization:	Repeated exposure to oil mist and vapour may cause respiratory damage.
Skin Sensitization:	Not expected to be a skin sensitization based on the information of ingredients.
Reproductive Toxicity:	N/D

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Aspiration Hazard:	Poses an aspiration hazard.
Inhalation:	May cause respiratory system irritation.
Ingestion:	May result in a chemically induced pneumonia.
Skin Contact:	Skin irritation should not occur if used as recommended. Repeated exposure may cause skin dryness or cracking.
Eye Contact:	May cause temporary eye irritation.
Carcinogenicity:	No known significant effects or critical hazards.

Section 12: Ecological Information

Eco-toxicity:	The product is not expected to be hazardous to the environment.
Persistence & Degradability:	The product is not classed as being biodegradable.
Stability (Hydrolysis):	The product is 95 - 99% refined mineral oils that are considered stable to hydrolysis.
Bio-accumulative Potential:	This is unlikely to be significant due to the low water solubility of the product.
Mobility in Soil:	The product is non-volatile. The product is insoluble in water and will spread on the surface of the water.
Results of PBT & vPvB Assessment:	Not classified as PBT/vPvB.
Other Adverse Effects:	N/D
N/A – Not Applicable	
N/D – Not Determined	

Section 13: Disposal Considerations

General Information:	When handling waste the same safety precautions apply as to when handling the product.
Disposal Methods:	Recover or recycle if possible. Waste including recovery duty bags and containers should be disposed of in accordance to the current applicable local laws and regulations, and the product characteristics at the time of disposal has to be taken into account. Do not dispose into the environment, drains or water courses. Dispose waste and non-recyclable products via a licensed waste disposal contractor.

Section 14: Transport Information

Marine Transport:	IMDG/GGVSee UN-NO: N/A
Air Transport:	ICAO/IATA UN-NO: N/A
Road/Rail Transport:	ADR/RID-GGVS-GGVE
(ADR/GGVS, RID/GGVE):	Not classified as dangerous goods for transport.



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N/A – Not Applicable

Section 15: Regulatory Information

Safety, Health and Environmental Regulations/Legislation for the Mixture:

Occupational Health and Safety Act 1993 Regulations for Hazardous Chemical Substances.

National Road Traffic Act, 1996 (Act 93 of 1996)

SANS 10228:2012- The identification and classification of dangerous goods for transport by road and rail modes.

National Environmental Management: Waste Act 59 of 2008

Chemical Safety Assessment carried outs: Not carried out.

Section 16: Other Information

General Information:	Only trained personnel should use this material.
Revision Date:	2019/08/07
Revision:	2
Distribution:	The information should be made available to all who handle the product.
Disclaimer:	This information is based on our current knowledge and is intended to describe the product for purposes of health, safety and environmental requirements only. It should therefore not be construed as guaranteeing any specific property of the product.