



SAFETY DATA SHEET

Page : 1

Revised edition no : 0

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Gulf Harmony ZF 46**10115/46/1**

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

Product identifier : Gulf Harmony ZF 46
Viscosity Grade : ISO VG 46
Product code Gulf Oil International : 10115/46/1
Relevant identified uses of the substance or mixture and uses advised against : Industrial hydraulic oil.
This oil should not be used for any other purpose than the intended use as a hydraulic oil without expert advice.
Details of the supplier of the safety data sheet : Gulf Oil Lubricants India Ltd,
IN Centre, 12th Road,
Marol, Andheri (East)
Mumbai - 400 093
Emergency telephone number : +91 22 66487777

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture : Not classified as dangerous under EC criteria.
Most important adverse physico-chemical effects : Combustible liquid.
Most important adverse human health effects : Prolonged or repeated skin contact with the material will remove natural oils and could lead to a dermatitis.
Most important adverse environmental effects : No specific risk for the environment.

Label elements:

- safety advices : Do not empty into drains; dispose of this material and its container in a safe way.
Other hazards : Injection under the skin can occur when using high pressure equipment. Overexposure to oil mist may cause respiratory irritations.
Oil mist deposited on surfaces may cause slip hazard.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical characterization : Mixture of highly refined mineral oils and additives. (PCA-content < 3% - IP 346)

Substance name	Contents	CAS No	EC No	Annex No	Ref REACH	Classification
Petroleum Distillate	: 0.183 - 0.339 %	----	----	----	----	R10 Xn: R65 Xi: R38
Alkylphosphonate, i.c. alkyl amine	: 0.06 - 0.112 %	----	----	----	----	Xi: R36
Aryl amine	: 0.06 - 0.112 %	----	----	----	----	Xn: R22 R43 N: R50-53
Alkaryl triazole	: 0.03 - 0.055 %	----	----	----	----	Xn: R22 Xi: R36 R52-53
Long chain alkenyl amine	: 0.003 - 0.006 %	----	----	----	----	Xn: R22 C: R35 N: R50

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SAFETY DATA SHEET

Page : 2

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4. FIRST AID MEASURES

Description of first aid measures:

- after inhalation : Assure fresh air breathing. If you feel unwell, seek medical advice.
- after contact with skin : Remove contaminated clothing and shoes. Wash skin thoroughly with mild soap and water. Never use kerosine or gasoline for cleaning the skin.
- after contact with the eyes : Rinse immediately with plenty of water. Seek medical attention if irritation develops.
- after ingestion : Do not induce vomiting. Seek medical attention immediately.
- after injection : If injected under the skin when using high pressure equipment, send casualty immediately to a hospital, even when there are few or no symptoms.

Most important symptoms and effects, both acute and delayed : Symptoms of overexposure to vapours include drowsiness, weakness, headache, dizziness, nausea, vomiting, dimming of vision.

Indication of any immediate medical attention and special treatment needed : High-pressure hydrocarbon injection injuries may produce substantial necrosis of underlying tissue despite an innocuous appearing external wound. Often these injuries require extensive emergency surgical debridement and all injuries should be evaluated by a specialist in order to assess the extent of the injury.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Water fog. Carbon dioxide. Foam. Dry chemical product.

Extinguishing media which shall not be used for safety reasons : Do not use a heavy water stream.

Special hazards arising from the substance or mixture : Under fire conditions, hazardous fumes will be present.

Advice for firefighters : Do not enter fire area without proper protective equipment, including respiratory protection. Wear self-contained breathing apparatus, rubber boots and thick rubber gloves. Use water spray or fog for cooling exposed containers. Avoid fire-fighting water to enter environment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

- for non-emergency personnel : Evacuate unnecessary personnel.
- for emergency responders : Equip cleanup crew with proper protection. Wear suitable protective clothing, gloves and eye or face protection. Eliminate every possible source of ignition.

Environmental precautions : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Avoid release to the environment. Notify authorities if liquid enters sewers or public waters. Spill area may be slippery.

Methods and material for containment and cleaning up : Clean up any spills as soon as possible, using an absorbent material to collect it. Use suitable disposal containers.

Reference to other sections : See Heading 8 & 13

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SAFETY DATA SHEET

Page : 3

Revised edition no : 0

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Gulf Harmony ZF 46**10115/46/1**

7. HANDLING AND STORAGE

- Precautions for safe handling** : Keep away from sources of ignition. No naked lights. No smoking. Use only in well ventilated areas. Avoid release to the environment. Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with soap and water before leaving work.
- Conditions for safe storage, including any incompatibilities** : Store this product in a dry location where it can be protected from the elements. Store in tightly closed, properly ventilated containers away from heat, sparks, open flame, strong oxidizers, radiations, and other initiators. Keep at temperature not exceeding 50°C.
- Specific end use(s)** : Industrial hydraulic oil.
This oil should not be used for any other purpose than the intended use as a hydraulic oil without expert advice.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters:

Occupational exposure limit values:

- **Australia** : National exposure standards for atmospheric contaminants in the occupational environment; Time-Weighted Average (normal eight-hour working day, for a five-day working week): 5 mg/m³ for oil mist, refined mineral. (National Occupational Health & Safety Commission [NOHSC: 1003(1995)])
- **Canada** : The American Conference of Governmental Industrial Hygienists (ACGIH) has assigned mineral oil mist a threshold limit value (TLV) of 5 mg/m(3) as a Time Weighted Average (TWA) for a normal 8-hour workday and a 40-hour workweek and a short-term exposure limit (STEL) of 10 mg/m(3) for periods not to exceed 15 minutes. Exposures at the STEL concentration should not be repeated more than four times a day and should be separated by intervals of at least 60 minutes. [ACGIH 1994, p. 28]
- **EU** : Occupational Exposure Standard (OES) of 5 mg/m³, 8-hour time-weighted average reference period for oil mist.
- **USA** : The American Conference of Governmental Industrial Hygienists (ACGIH) has assigned mineral oil mist a threshold limit value (TLV) of 5 mg/m(3) as a Time Weighted Average (TWA) for a normal 8-hour workday and a 40-hour workweek and a short-term exposure limit (STEL) of 10 mg/m(3) for periods not to exceed 15 minutes. Exposures at the STEL concentration should not be repeated more than four times a day and should be separated by intervals of at least 60 minutes. [ACGIH 1994, p. 28]

Occupational Exposure Limits

- Biological limit values** : No data available.

Exposure controls:

Individual protection measures, such as personal protective equipment:

- **eye / face protection** : Chemical goggles or safety glasses (EN 166)
 - **skin protection** : Wear suitable protective clothing.
 - **hand protection** : Wear suitable gloves resistant to chemical penetration. (EN 374)
 - **respiratory protection** : The use of Filtertype A (EN 141) is recommended If exceeding the Occupational Exposure Limit.
 - **others** : Do not wear leather soled shoes.
- Environmental exposure controls** : Avoid release to the environment.

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SAFETY DATA SHEET

Page : 4

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9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties:

- physical state	: Oily liquid.
- colour	: Yellow-brown.
- odour	: Light odour of petroleum.
- flash point	: 210°C
- density @ 15°C	: 875.8 kg/m ³
- solubility in water	: Insoluble.
- viscosity @ 40°C	: 45.9 cSt
- pour point	: -24°C
Other information	: See Product Data Sheet for detailed information.

10. STABILITY AND REACTIVITY

Reactivity	: No data available.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: None under normal conditions.
Conditions to avoid	: Extremely high or low temperatures.
Incompatible materials	: Strong oxidizing agents.
Hazardous decomposition products	: None under normal conditions.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects:

- acute toxicity	: No specific toxicity data on this product available.
- irritation	: Not expected to be an irritant to eyes or skin. Inhalation of fumes or vapours may cause respiratory irritation.
- corrosivity	: No adverse health effects were noted.
- sensitisation	: No sensitization effects known.
- carcinogenicity	: This product contains mineral oils which are considered to be severely refined and not considered to be carcinogenic under IARC. All of the oils in this product have been demonstrated to contain less than 3% extractables by the IP 346 test.
- mutagenicity	: Not expected to be mutagenetic.
- reproductive toxicity	: Not expected to be toxic.

Information on likely routes of exposure:

- after ingestion	: Ingestion may cause nausea, vomiting and diarrhoea.
- after inhalation	: Inhalation of vapours may cause respiratory irritation.
- after skincontact	: Prolonged or repeated skin contact with the material will remove natural oils and could lead to a dermatitis.
- after eyecontact	: Slight eye irritant upon direct contact.
Symptoms related to the physical, chemical and toxicological characteristics	: No adverse health effects were noted.
Delayed and immediate effects as well as chronic effects from short and long-term exposure	: No adverse health effects were noted.

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SAFETY DATA SHEET

Page : 5

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SECTION 11. TOXICOLOGICAL INFORMATION (continued)

Other toxicological information : No data available.

12. ECOLOGICAL INFORMATION

Toxicity : No specific ecotoxicity data on this product available.
Persistence and degradability : Not determined.
Bioaccumulative potential : No data available.
Mobility in soil : It is to be expected small mobility in soil. Some or a few components may get into the soil and may cause pollution of ground water. Product spreads on the water surface.
Results of PBT and vPvB assessment : Not applicable.
Other adverse effects : May contaminate water supplies.
Biodegradation : No data available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal : Dispose in a safe manner in accordance with local/national regulations.
Waste treatment methods : See Directive 2001/118/EC
Waste Code European Waste List : 13 02 05 - mineral-based non-chlorinated engine, gear and lubricating oils.
15 01 10 - packaging containing residues of or contaminated by dangerous substances.

14. TRANSPORT INFORMATION

Not regulated.

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture:

- **Australian Inventory of Chemical Substances (AICS)** : All components are in compliance with chemical notification requirements in Australia.
- **Canadian Environmental Protection Act (CEPA)** : All components are in compliance with the Canadian Environmental Protection Act (CEPA) and are present on the Domestic Substances List (DSL).
- **European Inventory of Existing Commercial Chemical Substances (EINECS)** : All components listed.
- **USA Toxic Substances Control Act (TSCA)** : All components of this material are on the US TSCA Inventory or are exempt.
- **Germany** : Water Hazard Class: 1 - low hazard to waters

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SAFETY DATA SHEET

Page : 6

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16. OTHER INFORMATION

Revision Indicators	: None.
Key to abbreviations and acronyms used in the safety data sheet	: ACGIH = American Conference of Industrial Hygienists CLP = Classification and Labelling of Substances and Preparations EC = European Commission. EN = European Norm IARC= International Agency for Research on Cancer IP = Institute of Petroleum. ISO = International Organization for Standardization NLGI = National Lubricating Grease Institute PCA = Polycyclic Aromatics TLV = Threshold Limit Value. TWA = Time Weighted Average VG = Viscosity Grade
Key literature references and sources for data	: Concawe Report 01/53, Concawe Report 01/54, Concawe Report 05/87. Regulations (EC) No 1907/2006, 1272/2008 & 453/2010 of the European Parliament and of the Council.
List of relevant R-phrases	: R10 : Flammable. R22 : Harmful if swallowed. R35 : Causes severe burns. R36 : Irritating to eyes. R38: Irritating to skin. R43 : May cause sensitization by skin contact. R50 : Very toxic to aquatic organisms. R50/53 : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R52/53 : Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R65: Harmful: may cause lung damage if swallowed.
Training advice	: See information supplied by the manufacturer.

The contents and format of this SDS are in accordance with COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

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