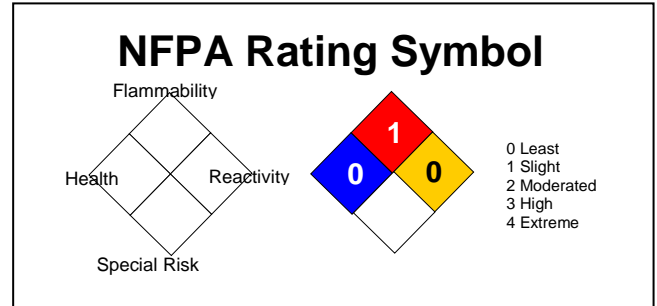


Hydraulic Anti Wear (AW) Oil ISO VG 68

1. COMPANY IDENTIFICATION

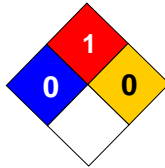
Company Name: Comercial Roshfrans, S.A. de C.V.
 Company Address: Av. Othón de Mendizábal Ote. 484
 Col. Nueva Industrial Vallejo
 Del. Gustavo. A. Madero
 07700 México, D. F.
 01 (800) 710-3626
 (55) 57-47-57-00
 Country: México City
 Web site: www.roshfrans.com
 Emergency Telephone Numbers (All located in México)
 SETIQ 24 Hours Assistance: 01-800-002-1400
 Comercial Roshfrans General Assistance
 MSDS Code: RHIDMSDS001
 Elaboration Date: 12/09/11
 Revision Date: 18/03/16



2. PRODUCT INFORMATION

Product Name: **Hydraulic Anti Wear (AW) Oil ISO VG 68**
 Chemical Name: Hydraulic Oil
 Family Name: Lubricant for hydraulic systems. Mixture of petroleum additives.
 Product CAS Number: N/D

NFPA Rating Symbol:



NFPA Color Interpretation: (Red) Inflammability; (Blue) Health; (Yellow) Reactivity; (White) Special Risk.

NFPA Number Interpretation: (0) Least, (1) Slight, (2) Moderated; (3) High, (4) Extreme.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	Component CAS Numbers	Average Concentration (Percent)
Mineral Oil (Petroleum Distillates)	Mixture	NA
Non-hazardous additives	Mixture	NA



Material Safety Data Sheet

INDUSTRIAL DIVISION

Hydraulic Fluid

Hydraulic Anti Wear (AW) Oil ISO VG 68

Composition

Comments: All the components of this material are in the Toxic Substance Control Act Chemical Substance Inventory.
This product fits the ACGIH definition for mineral oil mist.
The ACGIH TLV is 5 mg/m³. The OSHA PEL is 5 mg/m³. For other exposure limits consult local, state, provincial or territory authorities for acceptable exposure limits.

4. HAZARDS IDENTIFICATION

Potential Health Effects

- Eye: Not expected to cause prolonged or significant eye irritation.
- Skin: Contact with skin is not expected to cause prolonged or significant irritation. Repeated skin contact might cause irritation, defatting, drying and dermatitis. Not expected to be harmful to internal organs if absorbed through skin.
- Ingestion: Not expected to be harmful if swallowed.
- Inhalation: This product has a low vapour pressure and is not expected to present an inhalation exposure at ambient conditions. Upon heating to high temperatures, or mechanical actions which may produce vapours or mist, inhalation of product may cause irritation of the breathing passages.

5. FIRST AID MEASURES

- Eye: No specific first aid measures are required because this material is not expected to cause eye irritation. As a precaution remove contact lenses, if worn, and flush eye(s) with abundant water.
- Skin: Remove contaminated clothing and shoes. Use a waterless hand cleaner, or petroleum jelly, to remove material. Then wash skin with soap and water. Wash or clean contaminated clothing and shoes before reusing.
- Ingestion: No specific first aid measures are required because this product is not expected to be harmful if swallowed. Do not induce vomiting. As a precaution, give a person a person a glass of water to dilute material in stomach. If vomiting occurs naturally, rinse mouth and repeat administration of water, and get medical advice. Never provide anything by mouth to an unconscious or convulsing person.
- Inhalation: If exposed to excessive levels of this product in the air, move the exposed person to a well ventilated area with fresh air. Get medical attention if coughing or respiratory discomfort occurs.

Note to Physicians: Not Available.

6. FIRE-FIGHTING MEASURES

Fire Classification: Classification (29 CFR 1910.1200): Not classified by OSHA as flammable or combustible.

Flash Point: ASTM D 92 (COC) 428 °F (220°C)

Auto Ignition: N/A

NFPA Ratings: Flammability (1); Health (0); Reactivity (0).

Flammability Limits

(% by volume in air): Lower: NA Upper: NA

Extinguishing Media: Use water fog, foam, dry chemical – or carbon dioxide (CO₂) to extinguish flames. Water foam might cause frothing. Use water to keep fire-exposed containers cool. Water spray might be used to



Material Safety Data Sheet

INDUSTRIAL DIVISION

Hydraulic Fluid

Hydraulic Anti Wear (AW) Oil ISO VG 68

flush spill away from exposures. This material will burn although it is not easily ignited. Minimize breathing gases, vapour, or fumes. Use supplied air breathing equipment for enclosed or confined spaces, or as otherwise needed.

Combustion Products: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide (CO), carbon dioxide (CO₂), and unidentified organic compounds will be evolved when this material undergoes combustion. Incomplete combustion might produce smoke and irritating vapours.

Explosion Data: Not determined.

7. ACCIDENTAL RELEASE MEASURES

NAERG96, GUIDE 171 (low to moderate hazard). Eliminate all ignition sources. Avoid contact. Stop the source of the leak or release. Clean up spills immediately observing precautions in Exposure Controls/Personal Protection section. Contain liquid to prevent further contamination of soil, surface water or groundwater. Clean up using inert absorbents, dry clay, or diatomaceous earth. Avoid inhaling dust of diatomaceous earth for it might contain silica in very fine particle sizes, making of this a potential respiratory hazard. Place used absorbent in closed metal containers for later disposal, or burn absorbent in a suitable combustion chamber. Do not flush to sewers, streams or other bodies of water. Check with applicable jurisdiction for specific disposal requirements of spilled materials and empty containers. Notify the proper authorities immediately.

8. HANDLING AND STORAGE

Container (drums) is not designed to contain pressure. Do not apply pressure to empty container or it might rupture with explosive force. Empty containers retain product residue (solid, liquid and/or vapour) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other ignition sources. They might explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner, or properly disposed of.

Avoid inhalation and skin contact especially when handling used oil.

Keep this product (new or used) away from sources of ignition.

Avoid repeated skin contact.

Wash thoroughly after handling.

9. EXPOSURE CONTROLS/PERSONAL PROTECTION

General Considerations:

Consider the potential hazards of this material, applicable exposure limits, job activities, and other substances at work place when designing engineering controls and selecting personal protective equipment. If work practices are not adequate to prevent exposure to harmful levels of this product, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

Engineering Controls:

Use it in a well ventilated area. If user operations generate an oil mist, use process enclosures, local exhaust ventilation, or other engineering controls to contain airborne levels below the recommended mineral oil mist exposure limits.

Eye/Face Protection:

No special eye protection is normally required based on conditions of use. If an application might imply splashing, the use of safety goggles and/or face shield should be considered.



Hydraulic Anti Wear (AW) Oil ISO VG 68

- Skin/Body Protection:** No special protective clothing is normally required. If an application might imply splashing, select protective clothing depending on operations conducted. Avoid prolonged or frequently repeated skin contact with this product. Skin contact can be minimized by wearing protective impervious clothing (chemical resistance apron), including heat resistance or insulated gloves (viton, nitrile, or silver shield).
- Respiratory Protection:** No respiratory protection is normally required. If user operations generate an oil mist, determine and keep airborne concentrations below the recommended mineral oil mist exposure limits. If not, wear a NIOSH approved respirator that provides adequate protection from measured concentrations of this product. Use particulate respirators as air-purifying elements.

10. PHYSICAL AND CHEMICAL PROPERTIES

- Attention:** Data below are typical values and do not constitute a specification.
- Physical Description:** Brown viscous liquids.
- Odour:** Mild petroleum oil like.
- Odour Threshold (ppm):** N/A
- Ph:** N/A
- Vapour Pressure:** < 0.01 mmHg@ 20°C. Negligible at ambient temperature and pressure.
- Vapour Density (air=1):** Heavier than air.
- Boiling Point:** N/D
- Melting Point (solids):** N/A
- Pour Point:** - 16 °F (-9 °C)
- Solubility:** Soluble in hydrocarbon solvents. Not soluble in water.
- Density:** 0.8739 kg/L @ 60°F; 15.6°C
- Specific Gravity:** 0.8748 @ 60°F/60°F; 15.6°C/15.6°C
- Viscosity:** 68.00 mm²/s (cSt.) @ 104 °F (40 °C)
8.493 mm²/s (cSt.) @ 212 °F (100 °C)
- Volatility:** Non-volatile.
- Volatile Organic Compound:** N/A
- Evaporation Rate (Butyl Acetate=1):** N/D
- Flammability (solids):** N/A
- Auto Flammability:** N/A
- Explosive Properties:** N/A
- Oxidizing Properties:** N/A

11. STABILITY AND REACTIVITY

- Hazardous Decomposition Products:** May release CO_x, SO_x, H₂S, CaO_x, alkyl mercaptans, sulfides, aldehydes, methacrylate monomers, smoke and irritating vapours when heated to decomposition.



Hydraulic Anti Wear (AW) Oil ISO VG 68

Chemical Stability:	This product is stable under normal handling and storage conditions, and will not react violently with water.
Conditions to Avoid:	N/D
Conditions of Reactivity:	N/D
Incompatible Materials:	Reactive with oxidizing agents, acids, halogens and halogens compounds.
Hazardous Polymerisation:	Polymerisation will not occur under normal working conditions.
Polymerisation Avoid:	N/A

12. TOXICOLOGICAL INFORMATION

Acute Lethality:	Based on toxicity of components: Acute oral toxicity (LD50): >5000 mg/kg (rat) Acute dermal toxicity (LD50): >2000 mg/kg (rabbit) Acute inhalation toxicity (LC50): >2500 mg/m ³ /4h (rat).
Dermal Route:	Short term exposure is expected to cause only slight irritation, if any. Prolonged or repeated contact might cause skin irritation characterized by dermatitis or oil acne.
Inhalation Route:	Negligible breathing hazard at normal temperatures or recommended blending temperatures. Elevated temperatures or mechanical action might form vapours, mist or fumes. Inhalation of oil mists or vapours from hot oil might cause irritation of the upper respiratory tract.
Oral Route:	Ingestion of this product may lead to aspiration of the liquid, especially if vomiting occurs. This may result in chemical pneumonitis (inflammation of the lungs) and/or pulmonary edema (an accumulation of fluid in the lungs). It has a laxative effect.
Eye Irritation/ Inflammation:	Repeated or prolonged contact might cause transient irritation, but no permanent damage.
Immunotoxicity:	N/A
Skin Sensitization:	This product is not expected to be a skin sensitizer, based on the available data and the known hazards of the components.
Respiratory Tract Sensitization:	This product is not expected to be a respiratory tract sensitizer, based on the available data and the known hazards of the components.
Mutagenic:	This product is not known to contain any components at $\geq 0.1\%$ that have been shown to cause mutagenicity. Therefore, based upon the available data and the known hazards of the components, this product is not expected to be mutagen.
Reproductive Toxicity:	This product is not expected to be a reproductive hazard, based on the available data and the known hazards of the components.
Teratogenicity/ Embryotoxicity:	This product is not expected to be a teratogen or an embryotoxin, based on the available data and the known hazards of the components.
Carcinogenicity (ACGIH):	This product is not known to contain any chemicals at reportable quantities that are listed as A1 or A2 carcinogens by ACGIH.
Carcinogenicity (IARC):	This product is not known to contain any chemicals at reportable quantities that are listed as group 1, 2A or 2B carcinogens by IARC.
Carcinogenicity (NTP):	This product is not known to contain any chemicals at reportable quantities that are listed as carcinogens by NTP.
Carcinogenicity (IRIS):	This product is not known to contain any chemicals at reportable quantities that are listed as carcinogens by IRIS.



Hydraulic Anti Wear (AW) Oil ISO VG 68

Carcinogenicity (OSHA): This product is not known to contain any chemicals at reportable quantities that are listed as carcinogens by OSHA.

Additional Toxicology Information:

This product contains petroleum base oils which may be refined by various processes including severe solvent extraction, severe hydrocracking, or severe hydrotreating. None of the oils requires a cancer warning under the OSHA Hazard Communication Standard (29 CFR 1910.1200). These oils have not been listed in the National Toxicology Program (NTP) Annual Report nor have they been classified by the International Agency for Research on Cancer (IARC) as carcinogenic to humans (Group 1), probably carcinogenic to humans (Group 2A), or possibly carcinogenic to humans (Group 2B).

During use in engines, contamination of oil with low levels of cancer-causing combustion products occurs. Used motor oils have been shown to cause skin cancer in mice following repeated application and continuous exposure. Brief or intermittent skin contact with used motor oil is not expected to have serious effects in humans if the oil is thoroughly removed by washing with soap and water.

13. ECOLOGICAL INFORMATION

Ecotoxicity: The toxicity of this material to aquatic organisms has not been evaluated. Consequently, this material should be kept out of sewage and drainage systems and all bodies of water.

Environmental

Fate: This material is not expected to be readily biodegradable.

Mobility: When released into the environment, adsorption to sediment and soil will be the predominant behaviour.

Bio Accumulative

Potential: Bio accumulation is unlikely due to very low water solubility of these products; therefore bioavailability to aquatic organisms is minimal.

14. DISPOSAL CONSIDERATIONS

Place contaminated materials in containers and dispose of in a manner consistent with applicable regulations. Contact your sales representative, or local environmental, or health authorities for approved disposal or recycling methods.

15. TRANSPORT INFORMATION

The description shown might not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g. technical name) and mode-specific or quantity-specific shipping requirements.

DOT Shipping Name: Not regulated as hazardous material for transportation under 49 CFR.

DOT Hazard Class: NA

DOT Identification Number: NA

DOT Packing Group: NA

Additional Info: Lubricant Oil – Not hazardous by US DOT.

ADR/RID Hazard Class: NA

IMO: NA

IMDG: Not regulated for marine transportation according to IMDG Code.

IATA: Not regulated for aerial transportation.



Hydraulic Anti Wear (AW) Oil ISO VG 68

16. REGULATORY INFORMATION

US OSHA Hazard Communication Standard:	This product is classified as non-hazardous in accordance with OSHA 29 CFR 1910.1200.
EU Labeling:	This product is not dangerous as defined by the European Union Dangerous Substances/Preparations
Directives:	EU labeling not required.
Governmental Inventory Status:	This product is acceptable for use under the provisions of WHMIS-CPR. All components of this formulation are listed on the CEPA-DSL (Domestic Substance List) and the US EPA-TSCA inventory.
US Superfund Amendments and Reauthorization Act (SARA) Title III:	This product contains no "EXTREMELY HAZARDOUS SUBSTANCES".
SARA (311/312) Reportable Hazard Categories:	None.
SARA 313:	This product contains no chemicals subject to the supplier notification requirements of SARA (313) toxic release program.
Other Regulations:	This product is classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

17. OTHER INFORMATION

HMIS Ratings:	Flammability (1); Health (0); Reactivity (0).
HMIS Interpretation:	(0) Least, (1) Slight, (2) Moderated; (3) High, (4) Extreme.
Personal Protection Index Recommendation (Chronic Effect Indicator):	These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

Abbreviations that might have been used in this document:

ACGIH – American Conference of Governmental Industrial Hygienists	IRIS – Integrated Risk Information System
ADR – Agreement on Dangerous goods by Road (Europe)	LD50/LC50 – Lethal Dose/Concentration kill 50%
ASTM – American Society for Testing and Materials	LDLo/LCLo – Lowest Published Lethal Dose/Concentration
BOD5 – Biological Oxygen Demand in 5 days	NAERG'96 – North American Emergency Response Guide Book
C – Ceiling Limit	NFPA – National Fire Protection Association
CAN/CGA B149.2 – Propane Installation Code	NIOSH – National Institute for Occupational Safety & Health
CAS – Chemical Abstract Service Number	NPRI – National Pollutant Release Inventory
CEPA – Canadian Environmental Protection Act	NSNR - New Substances Notification Regulations (Canada)
CERCLA – Comprehensive Environmental Response, Compensation and Liability Act	N/A – Not Applicable
CFR – Code for Federal Regulations	() – Change Has Been Proposed
CHIP – Chemicals Hazard Information and Packaging Approved Supply List	NTP – National Toxicology Program
COD5 – Chemical Oxygen Demand in 5 days	OSHA – Occupational Safety & Health Administration
CPR – Controlled Products Regulations	PEL – Permissible Exposure Limit
DOT – Department of Transport	RCRA – Resource Conservation and Recovery Act
DSCCL – Dangerous Substance Classification and Labeling (Europe)	SARA – Superfund Amendments and Reorganization Act
DSD/DPD – Dangerous Substances or Dangerous Preparations Directives (Europe)	SD – Single Dose



Hydraulic Anti Wear (AW) Oil ISO VG 68

DSL – Domestic Substance List
 EEC/EU – European Economic Community/European Union
 EINECS – European Inventory of Existing Commercial Chemical Substances
 EPCRA – Emergency Planning and Community Right to Know Act
 FDA – Food and Drug Administration
 FIFRA – Federal Insecticide, Fungicide and Rodenticide Act
 HCS – Hazardous Communication System
 HMIS – Hazardous Material Information System
 IARC – International Agency for Research on Cancer
 RQ – Reportable Quantity
 NDA – No Data Available
 N/D – Not Determined

STEL – Short-term Exposure Limit
 TDG – Transportation Dangerous Goods (Canada)
 TDL_o/TCL_o – Lowest Published Toxic Dose/Concentration
 TLM – Median Tolerance Limit
 TLV-TWA – Threshold Limit Value – Time Weighted Average
 TPQ – Threshold Planning Quantity
 TSCA – Toxic Substance Control Act
 TWA – Time Weighted Average
 USEPA – United States Environmental Protection Agency
 USP – United States Pharmacopoeia
 WHMIS – Workplace Hazardous Material Information System

Note 1

Prepared according to the OSHA Hazard Communication Standard (29 CFR 1910.1200) and the ANSI MSDS Standard (Z400.1).

Note 2

Information given herein this document is offered in good faith as accurate. Conditions of use and suitability of this product for particular uses are beyond our control; all risks of use of this product are therefore assumed by the user and WE EXPRESSLY DISCLAIM ALL WARRANTIES OF EVERY KIND AND NATURE, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE IN RESPECT TO THE USE OR SUITABILITY OF THE PRODUCT. Comercial Roshfrans and its subsidiaries assume no responsibility for accuracy of information unless the document is the most current available one from an official distribution system. Comercial Roshfrans and its subsidiaries neither represent nor warrant that the format, content or product formulas contained in this document comply with the laws of any other country except the Republic of Mexico.

LAST PAGE OF THIS DOCUMENT