



MATERIAL & SAFETY DATA SHEET



SECTION 1: MATERIAL AND SUPPLY COMPANY IDENTIFICATION

Product Name:

PRO ZF HYDRAULIC FLUID RANGE

Recommended Use: Hydraulic Oil - Zinc Free

Supplier: Pro Oil SA (PTY) LTD
Unit 3, Shalem Park
60 Lauda Road
Killarney Gardens
Cape Town
South Africa
7441

Telephone: (+27) 21 556 6109 (24hrs)

Fax To Email: 086 733 8707

SECTION 2: HAZARDS IDENTIFICATION

This material is not hazardous according to regulatory guidelines (see (M)SDS Section 15)

Contains: Highly refined mineral oil

Other hazard information:
N/A

Physical / Chemical Hazards:
N/A

Health Hazards:
High-pressure injection under skin may cause serious damage. Excessive exposure may result in eye, skin, or respiratory irritation.

Environmental Hazards:
No specific ecotoxicity data on this product are available.

NOTE: This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients determined to be Non-Hazardous.
Substance(s) or Complex Substance(s).

Name	CAS#	Concentration*	GHS Hazard Codes
Highly refined mineral oil	Mixture	90 - 100% Weight	
Performance agents		0 - 10% Weight	

SECTION 4: FIRST AID MEASURES

INHALATION

Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.

SKIN CONTACT

Wash contact areas with soap and water. If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a physician as a surgical emergency. Even though initial symptoms from high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.

EYE CONTACT

Flush thoroughly with water. If irritation occurs, get medical assistance.

INGESTION

First aid is normally not required. Seek medical attention if discomfort occurs.

NOTE TO PHYSICIAN

None

SECTION 5: FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

Appropriate Extinguishing Media: Use water fog, foam, dry chemical or carbon dioxide (CO₂) to extinguish flames.

Inappropriate Extinguishing Media: Straight streams of water

FIRE FIGHTING

Fire Fighting Instructions: Evacuate area. Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply. Fire-fighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

Hazardous Combustion Products: Combustible material

SECTION 6: ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

PROTECTIVE MEASURES

Avoid contact with spilled material. See Section 5 for fire fighting information. See the Hazard Identification Section for Significant Hazards. See Section 4 for First Aid Advice. See Section 8 for advice on the minimum requirements for personal protective equipment. Additional protective measures may be necessary, depending on the specific circumstances and/or the expert judgment of the emergency responders.

For emergency responders: Respiratory protection: respiratory protection will be necessary only in special cases, e.g., formation of mists. Half-face or full-face respirator with filter(s) for dust/organic vapor or Self Contained Breathing Apparatus (SCBA) can be used depending on the size of spill and potential level of exposure. If the exposure cannot be completely characterized or an oxygen deficient atmosphere is possible or anticipated, SCBA is recommended. Work gloves that are resistant to hydrocarbons are recommended. Gloves made of polyvinyl acetate (PVA) are not water-resistant and are not suitable for emergency use. Chemical goggles are recommended if splashes or contact with eyes is possible. Small spills: normal antistatic work clothes are usually adequate. Large spills: full body suit of chemical resistant, antistatic material is recommended.

SPILL MANAGEMENT

Land Spill: Stop leak if you can do so without risk. Recover by pumping or with suitable absorbent.

Water Spill: Stop leak if you can do so without risk. Confine the spill immediately with booms. Warn other shipping. Remove from the surface by skimming or with suitable absorbents. Seek the advice of a specialist before using dispersants.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

ENVIRONMENTAL PRECAUTIONS

Large Spills: Dyke far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas.

SECTION 7: HANDLING AND STORAGE

HANDLING

Avoid eye contact and repeated or prolonged skin contact. Avoid inhalation of vapour, mist or aerosols.

STORAGE

Store in a cool, dry, well-ventilated place and out of direct sunlight. Store away from foodstuffs. Store away from incompatible materials described in Section 10. Store away from sources of heat and/or ignition. Keep container standing upright. Keep containers closed when not in use - check regularly for leaks.

SECTION 8: EXPOSURE CONTROL / PERSONAL PROTECTION

EXPOSURE LIMIT VALUES

Exposure limits/standards for materials that can be formed when handling this product:

NOTE: Limits/standards shown for guidance only. Follow applicable regulations.

BIOLOGICAL LIMITS

No biological limits allocated.

ENGINEERING CONTROLS

The level of protection and types of controls necessary will vary depending upon potential exposure conditions.

Control measures to consider:

No special requirements under ordinary conditions of use and with adequate ventilation.

PERSONAL PROTECTION

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

Respiratory Protection: If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include:

Particulate

No special requirements under ordinary conditions of use and with adequate ventilation.

For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapour warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

Hand Protection: Any specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions.

Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include:

Nitrile, Viton

No protection is ordinarily required under normal conditions of use.

Eye Protection: If contact is likely, safety glasses with side shields are recommended.

Skin and Body Protection: Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include:

No skin protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid skin contact.

Specific Hygiene Measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practise good housekeeping.

ENVIRONMENTAL CONTROLS

Comply with applicable environmental regulations limiting discharge to air, water and soil. Protect the environment by applying appropriate control measures to prevent or limit emissions.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Note: Physical and chemical properties are provided for safety, health and environmental considerations only and may not fully represent product specifications. Contact the Supplier for additional information.

GENERAL INFORMATION

Physical State: Liquid
Colour: Bright & Clear
Odour: Petroleum

IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

Relative Density (at 20 °C): 0.88 kg/l
Flammability (Solid, Gas): N/D
Flash Point: 205°C - 219°C (Dependent on Viscosity Grade - Please see Technical Data Sheet)
Flammable Limits (Approximate volume % in air): N/D
Autoignition Temperature: N/D
Boiling Point / Range: 157.2°C
Vapour Density (Air = 1): >1
Vapour Pressure at 38.7°C: <0.01 mmHg
pH: N/A
Solubility in Water: Insoluble in water
Viscosity: **ISO VG** **32** **46** **68** **100** **150**
Viscosity @ 40 °cSt **32.5** **47.1** **68.9** **100.5** **150.9**
Viscosity @ 100 ° cSt **5.47** **7.01** **8.98** **11.16** **11.6**
Oxidizing Properties: See Hazards Identification Section.

OTHER INFORMATION

Freezing Point: N/D
Melting Point: N/D
Pour Point: -12 °C to -33°C (Dependent on Viscosity Grade - Please see Technical Data Sheet)
DMSO Extract (mineral oil only), IP-346

SECTION 10: STABILITY AND REACTIVITY

REACTIVITY: May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

STABILITY: Material is stable under normal conditions.

CONDITIONS TO AVOID: Excessive heat. High energy sources of ignition.

INCOMPATIBLE MATERIALS: N/A

HAZARDOUS DECOMPOSITION PRODUCTS: N/D

POSSIBILITY OF HAZARDOUS REACTIONS: No known hazardous reactions.

SECTION 11: TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Acute Effects

Inhalation: Material may be an irritant to mucous membranes and respiratory tract.

Skin contact: Contact with skin may result in irritation.

Ingestion: Swallowing can result in nausea, vomiting and irritation of the gastrointestinal tract.

Eye contact: May be an eye irritant.

Acute toxicity

Inhalation: This material has been classified as non-hazardous. Contains a petroleum-based mineral oil.

Skin contact: This material has been classified as non-hazardous. Contact with the skin is not expected to cause prolonged or significant irritation

Ingestion: This material has been classified as non-hazardous.

Corrosion/Irritancy: Eye: this material has been classified as not corrosive or irritating to eyes.

Skin: This material has been classified as not corrosive or irritating to skin.

Sensitisation: Inhalation: this material has been classified as not a respiratory sensitiser. Skin: this material has been classified as not a skin sensitiser.

Aspiration hazard: This material has been classified as non-hazardous.

Specific target organ toxicity (single exposure): This material has been classified as non-hazardous.

Chronic Toxicity

Mutagenicity: This material has been classified as non-hazardous.

Carcinogenicity: This material has been classified as non-hazardous.

Reproductive toxicity (including via lactation): This material has been classified as non-hazardous.

Specific target organ toxicity (repeat exposure): This material has been classified as non-hazardous.

SECTION 12: ECOLOGICAL INFORMATION

Avoid contaminating waterways.

Acute aquatic hazard: This material has been classified as non-hazardous. Acute toxicity estimate (based on ingredients): >100 mg/L

Long-term aquatic hazard: This material has been classified as non-hazardous. Non-rapidly or rapidly degradable substance for which there are adequate chronic toxicity data available OR in the absence of chronic toxicity data, Acute toxicity estimate (based on ingredients): >100 mg/L, where the substance is not rapidly degradable and/or BCF < 500 and/or log Kow < 4.

Ecotoxicity in the soil environment: This material has been classified as non-hazardous.

Ecotoxicity to terrestrial vertebrates: This material has been classified as non-hazardous.

Ecotoxicity to terrestrial invertebrates: This material has been classified as non-hazardous.

Ecotoxicity: No information available.

Persistence and degradability: No information available.

Bioaccumulative potential: No information available.

Mobility: No information available.

SECTION 13: DISPOSAL CONSIDERATIONS

Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

DISPOSAL RECOMMENDATIONS

The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out.

Empty Container Warning: Empty Container Warning (where applicable): Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. DO NOT PRESSURISE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

SECTION 14: TRANSPORT INFORMATION

UN NUMBER: 1268

CLASS: 3

HAZCHEM CODE:

LAND (ADG): Not classified as Dangerous Goods

SEA (IMDG): Not classified as Dangerous Goods

Marine Pollutant: Not classified as Dangerous Goods

AIR (IATA): Not classified as Dangerous Goods

Transport in accordance with local regulations

SECTION 15: REGULATORY INFORMATION

No known specific national and/or regional regulations applicable to this product (including its ingredients).

Respirators must follow AS/NZS 1715/1716 standard for approved respirators.

In the absence of local approved authorities, follow U.S. NIOSH/MSHA, U.K. BSI, or joint Australia-New Zealand AS/NZS 1715/1716.

SECTION 16: OTHER INFORMATION

KEY TO ABBREVIATIONS AND ACRONYMS:

N/D = Not determined, N/A = Not applicable, STEL = Short-Term Exposure Limit, TWA = Time-Weighted Average

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