

MATERIAL SAFETY DATA SHEET (MSDS)



Section I - Product / Company Information

Product Name	UNIBRAKEFLUID DOT 3
Product Code	URC - FP001
Company Name	Unioil Petroleum Philippines Incorporated
Address	2701-A West Tower, PSE Centre, Exchange Road, Ortigas Centre, Pasig City, Philippines
Manufacturer	Union Refinery Corporation
Address	Rubbermaster Road, Bo. Lingunan, Valenzuela, Metro Manila
Chemical Family	Petroleum Hydrocarbons with Additives
Product Type	Lithium- Based Grease
Emergency Phone Number	293-03-78

Section II - Composition / Information on Ingredients

Preparation Description	Mixture of polyalkylene glycol monoalkyl ethers and polyalkylene glycol
Additional Information	Contains corrosion inhibitor and anti-oxidant formulation

Section III - Hazards Identification

Human Health Hazards	Slightly irritating to respiratory system. Irritating to eyes.
Safety Hazards	Not classified as flammable but will burn
Environmental Hazards	No specific hazards under normal use conditions
Other Hazards	Not classified as dangerous for supply or conveyance.

Section IV - First Aid Measures

Eye Contact	Immediately flush eye with large amounts of water for at least 15 minutes while holding eyelids open. Transport to the nearest medical facility for additional treatment.
Skin contact	Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention.
Inhalation	Remove to fresh air. If rapid recovery does not occur, transport to nearest medical facility for additional treatment.
Oral/Ingestion	If swallowed, do not induce vomiting, transport to nearest medical facility for additional treatment. Keep head below hips to prevent aspiration.
Advice to Physician	Absorption through the skin may occur on prolonged or repeated exposure. Ingestion may cause systematic effects at high dosage.

Section V - Fire Fighting Measures

Specific Hazards	Material will not burn unless preheated. Carbon monoxide maybe evolved if incomplete combustion occurs. Containers exposed to intense heat from fires should be cooled with large quantities of water.
Extinguishing Media	Alcohol resistant foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
Unsuitable Extinguishing Media	Do not use water in a jet.
Protective equipment for Firefighters	Wear full protective clothing and self-contained breathing apparatus
Additional Advice	Keep adjacent containers cool by spraying with water

Section VI - Accidental Release Measures

Protective Measures	Avoid contact with spilled or released material. Prevent from spreading or entering into drains, ditches or rivers by using sand, earth, or other appropriate barriers. Use appropriate containment to avoid environmental contamination. Ventilate contaminated area thoroughly.
Clean-up Methods-small spills (<1 drum)	Contain and cover the spillage with decontaminant, wet earth or wet sand and leave to react for at least 30 minutes. Contain run-off from residue flush and dispose of properly. Soak up residue with an absorbent such as clay, sand or other suitable material. Transfer by mechanical means to a labelled, sealable container for product recovery or safe disposal. Allow residues to evaporate or soak up with an appropriate solvent material and dispose of safely. Remove contaminated soil and dispose of safely.
Clean-up Methods-large liquid spill (>1 drum)	Contain and cover the spillage with decontaminant, wet earth or wet sand and leave to react for at least 30 minutes. Contain run-off from residue flush and dispose of properly. Soak up residue with an absorbent such as clay, sand or other suitable material. Transfer by mechanical means such as vacuum truck to a salvage tank for recovery or safe disposal. Do not flush away residues with water. Retain as contaminated waste. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely.

Section VII - Handling and Storage

General Precautions	Avoid breathing of or contact with material. Only use in well ventilated areas. Wash thoroughly after handling.
Handling Procedures	Avoid inhaling vapour and/or mists. Avoid contact with the skin. Electrostatic charges maybe generated during pumping. Electrostatic discharge may cause fire. Ensure electrical continuity by bonding and grounding (earthing) all equipment. Restrict line velocity during pumping in order to avoid generation of electrostatic discharge (≤ 10 m/sec). Avoid splash filling. Do NOT use compressed air for filling, discharging, or handling operations. Extinguish any naked flames. Do NOT smoke. Remove ignition sources. Avoid sparks.
Handling Temperatures	Ambient

Storage	Keep away from aerosols, flammables, oxidizing agents, corrosives and from products harmful or toxic to man or to the environment. Must be stored in a well ventilated area, away from sunlight, ignition sources and other sources of heat. Vapours from tanks should not be released to atmosphere. Breathing losses during storage should be controlled by a suitable vapour treatment system.
Storage Temperatures	Ambient
Product Transfer	Keep containers close when not in use. Do not use compressed air for filling, discharging or handling.
Unsuitable Materials	For containers, or container linings avoid plastics, aluminium.; For lines and fittings, avoid natural, neoprene, or nitrile rubbers.
Container Advice	Containers, even those that have been emptied, can contain explosive vapours. Do not cut, drill, grind, weld or perform.
Protective clothing	Skin protection not ordinarily required beyond standard issue work clothes. Chemical resistant gloves/gauntlets, boots, and apron.

Section VIII-PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Amber or as dyed. Liquid
Odour	Ethereal
pH	7- 11.5 As 50% volume aqueous ethanol solution.
Boiling Point	> 238 °C / 460 °F
Flash Point	>100 °C/ 212 °F (Pensky-Martens Closed Cup)
Auto-ignition Temperature	>300 °C/ 572 °F
Density	1000 - 1065 kg/m ³
Water Solubility	Miscible
Kinematic Viscosity	<1500 mm ² /s at -40 °C/ -40°F >1.5 mm ² /s at 100 °C/ 212 °F

Section IX-STABILITY AND REACTIVITY

Stability	Stable. Hygroscopic
Conditions to avoid	Exposure to water vapour
Materials to avoid	Mineral oils. Water vapour.
Hazardous Decomposition Products	Thermal decomposition is highly dependent on conditions. A complex mixture of airborne solids, liquids and gases, including carbon monoxide, carbon dioxide and other organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation.

Section X-TOXICOLOGICAL INFORMATION

Skin Irritations	Not expected to be irritating
Eye Irritations	Expected to be moderately irritating to eyes (but insufficient to classify).
Respiratory Irritation	Inhalation of vapours or mists may cause irritation to the respiratory system.
Acute Oral Toxicity	Expected to be of low toxicity LD50>2000 mg/kg, Rat
Acute Dermal Toxicity	Expected to be of low toxicity LD50>2000 mg/kg, Rat
Skin sensitisation	Not expected to be a skin sensitizer.

Acute Inhalation Toxicity	Expected to be of low toxicity, LD50>5 mg/l/4 hours, Rat
Mutagenicity	Not expected to be mutagenic.
Carcinogenicity	Insufficient information to make an assessment.
Repeated Dose Toxicity	Expected to be of low systemic toxicity on repeated exposure.

Section XI-ECOLOGICAL INFORMATION

Acute Toxicity	
Fish	Expected to have low toxicity: LC/EC/IC50 > 1000mg/l
Aquatic invertebrates	Expected to have low toxicity: LC/EC/IC50 > 1000mg/l
Algae	Expected to have low toxicity: LC/EC/IC50 > 1000mg/l
Microorganisms	Expected to have low toxicity: LC/EC/IC50 > 100mg/l
Mobility	Dissolves in water. If product enters soil, it will be highly mobile and may contaminate ground water.
Persistence/degradability	Expected to be inherently biodegradable.
Bioaccumulation	Does not have the potential to bioaccumulate significantly.

Section XII-DISPOSAL CONSIDERATIONS

Material Disposal	Recover or recycle if possible. Waste arising from a spillage or tank cleaning should be disposed of in accordance with prevailing regulations, preferably to a recognised collector or contractor. The competence of collector or contractor should be established beforehand. Remove all packaging for recovery or waste disposal.
Container Disposal	Disposed in accordance with prevailing regulations, preferably to a recognised collector or contractor. The competence of collector or contractor should be established beforehand.
Local Legislation	Disposal should be in accordance with applicable regional, national, and local laws and regulations.

Section XIII - Transport Information

IMDG	This material is not classified as dangerous under IMDG regulations.
IATA (Country variations may apply)	This material is not classified as dangerous under IATA regulations.

Section XIV - Regulatory Information

EC Classification	Not classified as dangerous under EC criteria.
EINECS (EC)	Listed
EC Safety Phrases	S2 Keep out of reach of children. S24 Avoid contact with skin. S46 If swallowed, seek medical advice immediately and show this container or label.

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