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SAFETY DATA SHEET

SECTION 1

PRODUCT AND COMPANY IDENTIFICATION

PRODUCT

Product Name: MOBIL HYDRAULIC BRAKE FLUID

Product Description: Glycol Ether

Product Code: 331454, 351010603040

Intended Use: Brake fluid

COMPANY IDENTIFICATION

Supplier: East Coast Lubes Pty Ltd (Queensland and Northern Territory)

A.B.N. 37 117 203 611 Cnr North and Mort Streets

Toowoomba, Queensland 4350 Australia

24 Hour Environmental / Health Emergency 1300 131 001

Telephone

Supplier General Contact 1800 069 019

Supplier: Southern Cross Lubes (Victoria and Tasmania)

58-66 Ajax Road

Altona, Victoria 3018, Australia

24 Hour Environmental / Health Emergency 1300 131 001

Telephone

Product Technical Information 1300 466 245 Supplier General Contact 1300 552 861

Supplier: Perkal Pty Ltd Trading as Statewide Oil (Western Australia)

A.B.N. 43 009 283 363

14 Beete Street

Welshpool, Western Australia 6106 Australia

24 Hour Environmental / Health Emergency (8:00am to 4:30pm Mon to Fri) 1300 919 904

Telephone

Product Technical Information(08) 9350 6777Supplier General Contact(08) 9350 6777

Supplier: Perkal Pty Ltd Trading as Roto Oil (South Australia)

A.B.N. 43 009 283 363

6-10 Streiff Rd

Wingfield, South Australia 5013 Australia

24 Hour Environmental / Health Emergency (8:00am to 4:30pm Mon to Fri) 1300 919 904

Telephone

Product Technical Information (08) 8359 8995 Supplier General Contact (08) 8359 8995

SECTION 2 HAZARDS IDENTIFICATION



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This material is hazardous according to regulatory guidelines (see (M)SDS Section 15).

GHS CLASSIFICATION:

Eye irritation: Category 2A. Reproductive toxicant (developmental): Category 2. Specific target organ toxicant (repeated exposure): Category 2.

GHS Label Elements:

Pictogram:





Signal Word: Warning

Hazard Statements:

Health: H319: Causes serious eye irritation. H361: Suspected of damaging the unborn child. H373: May cause damage to organs through prolonged or repeated exposure.

Precautionary Statements:

General: P101: If medical advice is needed, have product container or label at hand. P102: Keep out of reach of children. P103: Read label before use.

Prevention: P201: Obtain special instructions before use. P202: Do not handle until all safety precautions have been read and understood. P264: Wash skin thoroughly after handling. P280: Wear protective gloves and clothing. Response: P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308 + P313: IF exposed or concerned: Get medical advice/attention. P312: Call a POISON CENTER or doctor/physician if you feel unwell. P314: Get medical advice/attention if you feel unwell. P337 + P313: If eye irritation persists: Get medical advice/attention.

Storage: P405: Store locked up.

Disposal: P501: Dispose of contents and container in accordance with local regulations.

Contains: 2-(2-METHOXYETHOXY)-ETHANOL; ETHANOL, 2,2-OXYBIS-; ETHANOL, 2-(2-(2-BUTOXYETHOXY)-

Other hazard information:

Physical / Chemical Hazards:

No significant hazards.

Health Hazards:

High-pressure injection under skin may cause serious damage. Ingestion may cause serious adverse effects and may be fatal. May cause kidney failure and central nervous system effects. Prolonged exposure to elevated concentrations of mist or liquid may cause irritation of the skin, eyes, and respiratory tract. May be irritating to the skin, nose, throat, and lungs.



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Environmental Hazards:

No significant hazards.

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

This material is defined as a mixture.

Reportable Hazardous Substance(s) or Complex Substance(s)

Name	CAS#	Concentration*	GHS Hazard Codes
2-(2-METHOXYETHOXY)-ETHANOL	111-77-3	< 5%	H361(D)
ETHANOL, 2,2-OXYBIS-	111-46-6	< 20%	H302, H373
ETHANOL, 2-(2-(2-BUTOXYETHOXY)ETHOXY)-	143-22-6	20 - < 30%	H318

^{*} All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume. Other ingredients determined not to be hazardous up to 100%.

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 for at least 15 minutes. Get medical assistance.

INGESTION

Seek immediate medical attention. Seek immediate medical attention. Do not induce vomiting.

NOTE TO PHYSICIAN

This product contains ethylene glycol and/or diethylene glycol which, if ingested, are metabolized to toxic metabolites by the enzyme alcohol dehydrogenase, for which ethanol and 4-methylpyrazole {U.S. drug name Fomepizole, trade name Antizol} are antagonists. Administration of oral or intravenous ethanol or intravenous 4-methylpyrazole may arrest further metabolism of this material and thereby ameliorate the toxicity. Use of ethanol or 4-methylpyrazole does not affect toxic metabolites that are already present and is not a substitute for hemodialysis.

If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat appropriately.



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SECTION 5

FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

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

Inappropriate Extinguishing Media: Straight streams of water or standard foam

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.

Unusual Fire Hazards: Hazardous material. Firefighters should consider protective equipment indicated in Section 8.

Hazardous Combustion Products: Incomplete combustion products, Oxides of carbon, Smoke, Fume

FLAMMABILITY PROPERTIES

Flash Point [Method]: >100°C (212°F) [ASTM D-92]

Flammable Limits (Approximate volume % in air): LEL: N/D UEL: N/D

Autoignition Temperature: >300°C (572°F)

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. Warn or evacuate occupants in surrounding and downwind areas if required, due to toxicity or flammability of the 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.

SPILL MANAGEMENT

Land Spill: Stop leak if you can do so without risk. Recover by pumping or with suitable absorbent. Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. If liquid is too viscous for pumping, shovel it up into a suitable container for recycle or disposal.

Water Spill: Stop leak if you can do so without risk. Warn other shipping. This product emulsifies, disperses or is miscible in water. Remove material, as much as possible, using mechanical equipment.

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



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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

Prevent small spills and leakage to avoid slip hazard.

Static Accumulator: This material is not a static accumulator.

STORAGE

Do not allow to dry out during storage. Do not store in open or unlabelled containers. Keep container tightly closed and

Material is defined under the National Standard [NOHSC:1015] Storage and Handling of Workplace Dangerous Goods.

SECTION 8

EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMIT VALUES

Exposure limits/standards (Note: Exposure limits are not additive)

Substance Name	Form	Limit/Sta	Limit/Standard		Note	Source
ETHANOL, 2,2-OXYBIS-		TWA	100 mg/m3	23 ppm		Australia OELs
ETHANOL, 2,2-OXYBIS-		TWA	10 mg/m3			OARS WEEL

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:

Adequate ventilation should be provided so that exposure limits are not exceeded.

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



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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 protection is ordinarily required under normal 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

Chemical resistant gloves are recommended.

Eye Protection: Chemical goggles 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:

Chemical/oil resistant clothing is recommended.

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: Yellow Odour: Characteristic Odour Threshold: N/D

IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

Relative Density (at 20 °C): 1.04 Flammability (Solid, Gas): N/A

Flash Point [Method]: >100°C (212°F) [ASTM D-92]

Flammable Limits (Approximate volume % in air): LEL: N/D UEL: N/D

Autoignition Temperature: >300°C (572°F) Boiling Point / Range: > 260°C (500°F)



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Decomposition Temperature: N/D **Vapour Density (Air = 1):** N/D

Vapour Pressure: < 0.2 kPa (1.5 mm Hg) at 20 °C **Evaporation Rate (n-butyl acetate = 1):** N/D

pH: N/D

Log Pow (n-Octanol/Water Partition Coefficient): < 2

Solubility in Water: Complete

Viscosity: | 5 cSt (5 mm2/sec) at 20°C - 10 cSt (10 mm2/sec) at 20°C

Oxidizing Properties: See Hazards Identification Section.

OTHER INFORMATION

Freezing Point: N/D Melting Point: N/A

Pour Point: -50°C (-58°F)

SECTION 10

STABILITY AND REACTIVITY

STABILITY: Material is stable under normal conditions.

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

INCOMPATIBLE MATERIALS: Strong oxidisers

HAZARDOUS DECOMPOSITION PRODUCTS: Material does not decompose at ambient temperatures.

POSSIBILITY OF HAZARDOUS REACTIONS: Hazardous polymerization will not occur.

SECTION 11

TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

Hazard Class	Conclusion / Remarks
Inhalation	
Acute Toxicity: No end point data for material.	Minimally Toxic. Based on assessment of the components.
Irritation: No end point data for material.	Negligible hazard at ambient/normal handling temperatures.
Ingestion	
Acute Toxicity: No end point data for material.	Moderately toxic. Based on assessment of the components.
Skin	
Acute Toxicity: No end point data for material.	Minimally Toxic. Based on assessment of the components.
Skin Corrosion/Irritation: No end point data for material.	Negligible irritation to skin at ambient temperatures. Based on assessment of the components.
Eye	
Serious Eye Damage/Irritation: No end point data for material.	Irritating and will injure eye tissue. Based on assessment of the components.
Sensitisation	
Respiratory Sensitization: No end point data for material.	Not expected to be a respiratory sensitizer.



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Skin Sensitization: No end point data for Not expected to be a skin sensitizer. Based on assessment of the material. components. Aspiration: No end point data for material. Not expected to be an aspiration hazard. Based on physicochemical properties of the material. Germ Cell Mutagenicity: No end point data Not expected to be a germ cell mutagen. Based on assessment of for material. the components. Carcinogenicity: No end point data for Not expected to cause cancer. Based on assessment of the material. components. Reproductive Toxicity: No end point data Caused damage to the fetus in laboratory animals, but the relevance to humans is uncertain. Based on assessment of the for material. components. Lactation: No end point data for material. Not expected to cause harm to breast-fed children. Specific Target Organ Toxicity (STOT) Single Exposure: No end point data for Not expected to cause organ damage from a single exposure. material.

TOXICITY FOR SUBSTANCES

Repeated Exposure: No end point data for

NAME	ACUTE TOXICITY
ETHANOL, 2-(2-(2-	Dermal Lethality: LD 50 6.6 g/kg (Rat); Oral Lethality: LD 50 3.5
BUTOXYETHOXY)ETHOXY)-	g/kg (Rat)

OTHER INFORMATION

Contains:

material.

DIETHYLENE GLYCOL (DEG): Orally, DEG is more toxic to humans than animal test data indicate. Probable lethal dose for an adult is about 50 ml (2 oz.), or 2 -3 swallows. Smaller amounts may cause kidney degeneration and failure. Benign urinary bladder tumours were observed in rats, no tumours were observed in mice. MONO- AND DIETHYLENE GLYCOLS: Oral exposure may produce kidney damage.

Concentrated, prolonged or deliberate exposure may cause organ

damage. Based on assessment of the components.

IARC Classification:

The following ingredients are cited on the lists below: None.

--REGULATORY LISTS SEARCHED--

1 = IARC 1 2 = IARC 2A 3 = IARC 2B

	SECTION 12	ECOLOGICAL INFORMATION	
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The information given is based on data available for the material, the components of the material, and similar materials.

ECOTOXICITY

Material -- Not expected to be harmful to aquatic organisms.

MOBILITY

Majority of components -- Expected to remain in water or migrate through soil.



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PERSISTENCE AND DEGRADABILITY

Biodegradation:

Material -- Expected to be inherently biodegradable

BIOACCUMULATION POTENTIAL

Material -- Potential to bioaccumulate is low.

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

Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products. Dispose of empty container as normal refuse.

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

LAND (ADG): Not Regulated for Land Transport

SEA (IMDG): Not Regulated for Sea Transport according to IMDG-Code

Marine Pollutant: No

AIR (IATA): Not Regulated for Air Transport

SECTION 15

REGULATORY INFORMATION

This material is considered hazardous according to Australia Model Work Health and Safety Regulations.

Product is not regulated according to Australian Dangerous Goods Code.



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No Poisson Out and the contract of the contract of the Uniform Out and Free CM (Fig. 2010).

No Poison Schedule number allocated by the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) established under the Therapeutic Goods Act.

AS1940 COMBUSTIBLE CLASS: C1

REGULATORY STATUS AND APPLICABLE LAWS AND REGULATIONS

Listed or exempt from listing/notification on the following chemical inventories: AICS, DSL, ENCS, IECSC, KECI, PICCS, TSCA

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

KEY TO THE H-CODES CONTAINED IN SECTION 3 OF THIS DOCUMENT (for information only):

H302: Harmful if swallowed; Acute Tox Oral, Cat 4

H318: Causes serious eye damage; Serious Eye Damage/Irr, Cat 1

H361(D): Suspected of damaging the unborn child; Repro Tox, Cat 2 (Develop)

H373: May cause damage to organs through prolonged or repeated exposure; Target Organ, Repeated, Cat 2

THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:

Perkal Pty Ltd Trading as Roto Oil (South Australia): Section 01: Supplier Mailing Address information was added. Perkal Pty Ltd Trading as Statewide Oil (Western Australia): Section 01: Supplier Mailing Address information was added.

Southern Cross Lubes (Victoria and Tasmania): Section 01: Supplier Mailing Address information was added. Company Logo (Fld 1) information was modified.

GHS Precautionary Statements - Prevention information was modified.

Perkal Pty Ltd Trading as Roto Oil (South Australia): Section 01: Supplier Mailing Address information was deleted. Perkal Pty Ltd Trading as Statewide Oil (Western Australia): Section 01: Supplier Mailing Address information was deleted.

Section 04: First Aid Notes information was modified.

Section 05: Fire Fighting Measures - Fire Fighting Instruction information was modified.

Section 07: Handling and Storage - Storage Phrases information was modified.

Section 16: Global Disclaimer information was modified.

Southern Cross Oil Pty Ltd Trading as Southern Cross Lubes (Victoria and Tasmania): Section 01: Supplier Mailing Address information was deleted.

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DGN: 2029591DAU (1012180)

Prepared by: Exxon Mobil Corporation

EMBSI, Clinton NJ USA

Contact Point: See Section 1 for Local Contact number

End of (M)SDS