

MATERIAL SAFETY DATA SHEET

SECTION 1 – IDENTIFICATION OF THE MATERIAL AND SUPPLIER

PRODUCT NAME: Brake Fluid

PRODUCT CODE: BF

RECOMMENDED USE: Motor vehicle brake fluid.

SUPPLIER NAME: PENRITE OIL Company Pty Ltd (ABN: 25005 001 525)
ADDRESS: 88 Lewis Road, Wantirna South, Victoria, 3152

TELEPHONE NUMBER: 03 9801 0877
EMERGENCY TEL. NUMBER: 03 9801 0877 Business Hours.

SECTION 2 – HAZARDS IDENTIFICATION

Statement of Hazardous Nature of Product: This product is not classified as Hazardous according to criteria of the National Occupational Health and Safety Commission (SafeWork Australia). This product is not classified as dangerous goods according to the ADG Code.

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENTS	CAS NUMBER	PROPORTION % W/W
Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]- (Triethylene glycol monobutyl ether or TEGBE)	143-22-6	< 20%
Ethanol, 2-(2-methoxyethoxy)- (Diethylene glycol monomethyl ether)	111-77-3	< 5%
Ethanol, 2,2'-oxybis- (Diethylene glycol)	111-46-6	< 2.5%

SECTION 4 – FIRST AID MEASURES

INGESTION: Rinse mouth out and drink a glass of water. Due to the presence of glycol components, the manufacturer recommends that if swallowed, do NOT induce vomiting. Due to the presence of the Diethylene glycol component, it is recommended that if swallowed that medical assistance be sort immediately taking the label or MSDS with you.

EYE: If in eyes, hold eyelids apart and flush the eye immediately with large amounts of running water. Continue flushing for at least 15 minutes or until advised to stop by a doctor. Check for contact lenses. If there are contact lenses, these should be removed under supervision. After flushing, if irritation develops or persists, seek medical assistance.

SKIN CONTACT: If skin or hair contact has occurred remove any contaminated clothing, wash skin or hair thoroughly with water. If irritation develops or persists, consult a Doctor.

INHALATION: If affected, remove the patient from contaminated area, if safe to do so. Lay patient down in a well-ventilated area and reassure them. If not breathing, provide artificial respiration and seek immediate medical assistance. If unconscious, place in a recovery position and seek immediate medical assistance.

FIRST AID FACILITIES: Eye wash fountain and safety showers are recommended.

ADVICE TO DOCTOR: Treat symptomatically.

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SECTION 5 – FIRE FIGHTING MEASURES

FIRE:	This product is not flammable under conditions of use. Is a combustible liquid that will burn if preheated. Keep storage tanks, pipelines, fire exposed surfaces, etc. cool with water spray.
EXPLOSION:	No information to indicate that the product is an explosion hazard. Extinguish all sources of flame or spark. Closed containers may explode when exposed to extreme heat. Do not cut, weld, drill or pressurise empty metal containers.
FIRE EXTINGUISHING MEDIA:	Use extinguishing media appropriate for surrounding fire. Use carbon dioxide, alcohol resistant foam, dry chemical or water fog. Spray down fumes resulting from fire. Avoid using full water jet directed at residual material that may be burning. Water may cause splattering.
COMBUSTION HAZARDS:	Combustion may produce oxides of carbon as well as small amounts of smoke and irritating vapours.
PROTECTIVE EQUIPMENT:	In the event of a fire, wear full protective clothing and self-contained breathing equipment with full-face piece operated in the pressure demand or other positive pressure mode.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

PERSONAL PROTECTION:	Wear gloves, glasses/goggles, boots and full-length clothing. During routine operation a respirator is not required. However, if mists or vapours are generated, an approved organic vapour/particulate respirator is required.
EMERGENCY PROCEDURES:	Ventilate area and extinguish and/or remove all sources of ignition. Stop the leak if safe to do so. Caution: The spilled product will be slippery. Contain the spill and absorb with a proprietary absorbent material, sand or earth. Place used absorbent in suitable containers and follow local and state regulations for the disposal of waste. Do not allow product to enter drains, surface water, sewers or watercourses - inform local authorities if this occurs.
CLEANING PROCEDURES:	Having contained the spill, collect all material quickly as mentioned above. Personnel must wear gloves, goggles or glasses, boots and full-length clothing during cleaning procedures. Wash contaminated area and objects with detergent and water after spill has been cleared. Rinse the cleaned area with water.

SECTION 7 – HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING:	Avoid contact with the product by using appropriate protective equipment such as gloves, glasses or goggles and full-length clothing. Eating, drinking, and smoking should be prohibited in the area where this material is handled, stored and processed. Workers should follow good personal hygiene practices, such as washing hands before eating, drinking and smoking. Keep containers tightly closed when not in use. Prevent product from entering waterways, drains or sewers.
CONDITIONS FOR SAFE STORAGE:	Classified as a Combustible Liquid. Store in a well ventilated area away from direct sunlight, ignition sources, oxidising agents, foodstuffs and clothing. Keep containers closed when not in use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage and to minimise absorption of moisture from the air.
INCOMPATIBILITIES:	Oxidizing substances including sulphuric and perchloric acids and isocyanates.

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SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

AIRBORNE EXPOSURE:	Exposure standards for the product have not been established. However, in the operation of certain equipment or at elevated temperatures, if mists, vapours or sprays are generated the following Exposure Standard should be observed: Ethanol, 2,2'-oxybis- (Diethylene glycol) CAS No: 111-46-6 Time Weighted Average (TWA): 23 ppm (100 mg/m ³).
VENTILATION SYSTEMS:	Special ventilation is not normally required. However, in the operation of certain equipment or at elevated temperatures mists, sprays or vapour may be generated and exhaust ventilation should be provided to maintain airborne concentration levels below the exposure standard.
PERSONAL RESPIRATORS:	During routine operation a respirator is not required. However, if mists or vapours are generated, an approved organic vapour/particulate respirator is required. Use respirators in accordance with AS 1715 and AS 1716.
GLOVE TYPE:	Wear gloves to provide hand protection. PVC and polyethylene natural or butyl rubber gloves are recommended.
CLOTHING:	During normal operating procedures, long sleeved clothing is recommended to avoid skin contact. Soiled clothing should be washed with detergent prior to re-use.
EYE PROTECTION:	Wear safety glasses/goggles to avoid eye contact when handling. If there is a risk of splashing during use, a full face shield is recommended.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Clear colourless to light amber liquid.
ODOUR:	Characteristic bland odour.
VAPOUR DENSITY:	No data available.
VAPOUR PRESSURE (kPa):	< 0.2 kPa at 20°C.
DENSITY (g/mL @ 20°C):	Typically 1.04 to 1.09.
VISCOSITY (cSt @ 100°C):	Typically 2.5.
VISCOSITY (cSt @ 20°C):	Typically 5 to 10.
FLASHPOINT (°C):	> 100°C.
FLAMMABILITY LIMITS (%):	No data available.
SOLUBILITY IN WATER(g/L):	Fully miscible in water.
BOILING RANGE (°C):	No data available.
% VOLATILE-VOL/VOL:	No data available.
EVAPORATION RATE:	No data available, though expected to be negligible.
pH:	7.0 to 10.5.

SECTION 10 – STABILITY AND REACTIVITY

CHEMICAL STABILITY:	Stable under recommended storage and handling conditions (see section 7).
CONDITIONS TO AVOID:	Observe the usual precautionary measures for handling chemicals. Do not heat the container or leave the container open when not in use. Glycol ethers can form peroxides on storage; do not distil to dryness.
INCOMPATIBLES:	Oxidizing substances including sulphuric and perchloric acids and isocyanates.
HAZARDOUS DECOMPOSITION PRODUCTS:	Combustion may produce oxides of carbon as well as small amounts of smoke and irritating vapours.
HAZARDOUS REACTIONS:	Keep away from strong oxidising agents and isocyanates. Hazardous polymerisation does not occur.

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SECTION 11 – TOXICOLOGICAL INFORMATION

HEALTH EFFECTS

ACUTE:

SWALLOWED:

Swallowing may cause nausea, vomiting, dizziness, gastrointestinal irritation and possibly central nervous system depression. Ingestion of large amounts may lead to renal damage, which in extreme cases could lead to renal failure. Based upon assessment of similar products, the Acute Oral Toxicity is expected to be LD₅₀ (rat) >5000 mg/kg. If vomiting has occurred after ingestion, the person should be observed to ensure aspiration into the lungs has not occurred. During normal usage ingestion should not be a means of exposure.

EYE:

May be mildly irritating to the eyes, but is not classified as an eye irritant by OECD Test Method 405. Symptoms may include localised burning, redness and tearing.

SKIN:

May be mildly irritating to the skin, but is not classified as a skin irritant by OECD Test Method 404. Acute percutaneous toxicity is low LD₅₀ (skin, rat) >2000 mg/kg. Correct handling procedures incorporating appropriate protective clothing and gloves should minimise the risk of skin irritation. People with pre-existing skin conditions, such as dermatitis, should take extreme care so as not to exacerbate the condition.

INHALED:

No data to indicate a toxic inhalation hazard. Inhalation of vapours or mist (generated at elevated temperatures or by mechanical action) may cause irritation to the nose and throat. Inhalation of large amounts of vapours or mists may cause effects similar to those of ingestion.

CHRONIC:

Prolonged, repeated, long term exposure to the product via skin contact may lead to irritation of the skin. Observation of good work practices should minimise the potential for this to occur.

TOXICITY DATA:

There is no data on the product as a whole.

Immunotoxicity:

Not available.

Skin Sensitisation:

This product is not expected to be a skin sensitizer, based on the available data and the known hazards of the components.

Respiratory Tract Sensitisation: 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 expected to be a mutagen, based on the available data and the known hazards of the components.

Reproductive Toxicity:

This product is not expected to be a reproductive hazard, based on the available data and the known hazards of the components. Ethanol, 2-(2-methoxyethoxy)-(Diethylene glycol monomethyl ether) has been shown to affect foetus development in some studies and is classified as Reproductive Category 3, R63 - possible risk of harm to the unborn child. This ingredient is present below the nominated Cut-off level.

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:

This product is not expected to be carcinogenic, based on the available data and the known hazards of the components.

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SECTION 12 – ECOLOGICAL DATA

ECOTOXICITY:	The product is of low acute ecotoxicity. Fish (Oncorhynchus Mykiss) 96hr, LD ₅₀ > 100mg/L. Daphnia 48hr, EC ₅₀ not determined, but expected to be virtually non-toxic based upon the known hazards of the components. Algae 72hr, EC ₅₀ not determined, but expected to be virtually non-toxic based upon the known hazards of the components.
PERSISTENCE & DEGRADABILITY:	The product is inherently biodegradable and is expected to be readily biodegradable. Testing according to OECD 302B (Zahn Wellans/EMPA) = 100% elimination at 21 days.
MOBILITY:	Soluble in water and will partition into the aqueous phase. Volatilisation from water to air is not expected. Mobile in soil until degraded.
ENVIRONMENTAL FATE:	No information is available.
BIOACCUMULATIVE POTENTIAL:	The product is not expected to bioaccumulate. The Log POW (OECD 117) for all the main ingredients is < 2.0.

SECTION 13 – DISPOSAL CONSIDERATIONS

DISPOSAL METHODS/ CONTAINERS:	Spilled product should be shovelled into a suitable waste container, such as a plastic drum and then be treated as a solid waste. Follow state or local regulations for disposal of the waste. The product should not be released to the environment, so any unused material or contaminated containers should be disposed of as hazardous waste at an appropriate collection depot or be recycled wherever possible. Dispose of containers and unused contents in accordance with Federal, State and local requirements. Do not allow product to enter drains, sewers and watercourses.
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SECTION 14 – TRANSPORT INFORMATION

This product is not regulated according to the ADG Code.

UN NUMBER:	Not applicable
PROPER SHIPPING NAME:	Not applicable
ADG CODE:	Not applicable
PACKAGING GROUP:	Not applicable
SPECIAL PROVISION:	Not applicable
HAZCHEM CODE:	Not applicable

SECTION 15 – REGULATORY INFORMATION

This product is not classified as Hazardous according to criteria of the National Occupational Health and Safety Commission (Safe Work Australia). All ingredients are on the AICS List.

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SECTION 16 – OTHER INFORMATION

Date of MSDS Preparation: 25th February 2011

Revision: 2.2

ACRONYMS

SUSMP	Standard for the Uniform Scheduling of Medicines and Poisons
ADG Code	Australian Code for the Transport of Dangerous Goods by Road and Rail
CAS Number	Chemical Abstracts Service Registry Number
UN Number	United Nations Number
ACGIH	American Conference of Governmental Industrial Hygienists
R-Phrase	Risk Phrases
S-Phrase	Safety Phrases
HAZCHEM No	An emergency action code of numbers and letters which gives information to emergency services
NOHSC	National Occupational Health and Safety Commission
AICS	Australian Inventory of Chemical Substances

CONTACT POINT

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TELEPHONE NUMBER: (03) 9801 0877 Business Hours

All information contained in this Material Safety Data Sheet and the health, safety and environmental information are considered to be accurate to the best of our knowledge as of the issue date specified above. However, no warranty or representation, expressed or implied, is made as to the accuracy or completeness of the data and information contained in this data sheet.

Health and safety precautions and environmental advice noted in this data sheet may not be accurate for all individuals and/or situations. It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. The Company accepts no responsibility for any injury, loss or damage, resulting from abnormal use of the material, from any failure to adhere to recommendations, or from any hazards inherent in the nature of the material.