

MATERIAL SAFETY DATA SHEET

SECTION 1 – IDENTIFICATION OF THE MATERIAL AND SUPPLIER

PRODUCT NAME: SIN Brake Fluid
PRODUCT CODE: SINBF
RECOMMENDED USE: High performance 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]-	143-22-6	< 20%
Ethanol, 2-(2-methoxyethoxy)-	111-77-3	< 5%
Ethanol, 2,2'-oxybis-	111-46-6	< 2.5%
Other ingredients determined not to be hazardous	Mixture	To 100%

SECTION 4 – FIRST AID MEASURES

INGESTION: Rinse mouth out and drink plenty of water. Due to the presence of glycols in the product, do NOT induce vomiting except under medical supervision. After ingesting the material a person should seek urgent medical assistance taking this 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 medical supervision. After flushing, it is recommended that you seek medical assistance taking the MSDS with you.

SKIN CONTACT: If skin or hair contact has occurred remove any contaminated clothing, wash skin or hair thoroughly with soap and 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: This product contains small amounts of ethanol, 2,2'-oxybis- (also known as diethylene glycol) as well as other glycols. Glycols, including diethylene glycol can be metabolised to toxic metabolites. The Poisons Information Centre should be contacted for information on how to deal with glycol ingestion.

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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, 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 Class 2 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. Glycols can absorb moisture from the atmosphere so ensure containers are tightly closed.
- INCOMPATIBILITIES:** Strong oxidizing substances including strong acids and mineral oils.

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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 are generated the manufacturer recommends the following Exposure Standards:
Total Vapour, Time Weighted Average (TWA): 100 mg/m³
Total Particulate, Time Weighted Average (TWA): 10 mg/m³
The product contains ethanol, 2,2'-oxybis- (also known as diethylene glycol):
Time Weighted Average (TWA): 23ppm; 100 mg/m³
- VENTILATION SYSTEMS:** Special ventilation is not normally required. However, in the operation of certain equipment or at elevated temperatures mists 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. Polyethylene, natural or butyl rubber and PVC 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 liquid.
ODOUR: Bland, characteristic mild glycol odour.
VAPOUR DENSITY: No data available.
VAPOUR PRESSURE: < 2 millibars 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 soluble in water.
BOILING RANGE (°C): No data available.
% VOLATILE-VOL/VOL: No data available.
EVAPORATION RATE: 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.
- INCOMPATIBLES:** Strong oxidizing substances including strong acids and mineral oils.
- HAZARDOUS DECOMPOSITION PRODUCTS:** Combustion may produce oxides of carbon, smoke and irritating vapours.
- HAZARDOUS REACTIONS:** Glycol ethers can form peroxides on storage - do not distil to dryness. Hazardous polymerisation does not occur.

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SECTION 11 – TOXICOLOGICAL INFORMATION

HEALTH EFFECTS

ACUTE:

SWALLOWED:

This product is expected to have a low order of toxicity associated with it when small amounts are accidentally ingested. However, due to the presence of glycols, if a significant amount is ingested there is a risk of renal damage which in extreme cases could lead to kidney failure, coma and death. Based upon assessment of similar products, the Acute Oral Toxicity is expected to be LD₅₀ (rat) >5000 mg/kg. The manufacturer states that the lethal dose in man could be considerably less. During normal usage ingestion should not be a means of exposure.

EYE:

May be mildly irritating to the eyes. Symptoms may include localised burning, redness and tearing.

SKIN:

May be mildly irritating to the skin. 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 and may cause systemic effects similar to 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. One of the components, Ethanol, 2-(2-methoxyethoxy)- (also known as methyl diglycol or diethylene glycol monomethyl ether) is rated as Substances Toxic to Reproduction, Category 3; R63 - Possible risk of harm to the unborn child. However, this is present at levels below the nominated cut-off levels.

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 expected to have low acute ecotoxicity. The LC50 (Fish (Oncorhynchus mykiss, 96hr): > 100mg/L.
PERSISTENCE & DEGRADABILITY:	The product is expected to be readily biodegradable. The OECD 302B (Zahn Wellans/EMPA) = 100% elimination in 21 days.
MOBILITY:	The product is soluble in water and will partition into the aqueous phase. Volatilisation from water to air is not expected. The product is expected to be mobile in soil until degraded.
ENVIRONMENTAL FATE:	No information is available.
BIOACCUMULATIVE POTENTIAL:	The product is not expected to bioaccumulate. The Log Pow for all 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: 9th September 2010

Revision: 0.0

ACRONYMS

SUSDP	Standard for the Uniform Scheduling of Drugs 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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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.