

# SAFETY DATA SHEET

## SECTION 1 – IDENTIFICATION: PRODUCT IDENTIFIER/CHEMICAL IDENTITY

**1.1 PRODUCT IDENTIFIER:** DOT 3 Brake Fluid

**1.2 PRODUCT CODE:** DOT3

**1.3 RELEVANT IDENTIFIED USES OF THE MIXTURE AND USES ADVISED AGAINST:**  
**RELEVANT IDENTIFIED USES:** Brake fluid.  
**RESTRICTIONS ON USE:** None known.


**1.4 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET:**  
**SUPPLIER NAME:** PENRITE OIL Company Pty Ltd (ABN: 25005 001 525),  
**ADDRESS (Australia):** 110-116 Greens Road, Dandenong South VIC, Australia, 3175  
**TELEPHONE NUMBER (Australia):** 1300 736 748; +61 3 9801 0877 (Int); Fax: 1800 736 748  
**ADDRESS (New Zealand):** 75 Lady Ruby Drive, East Tamaki, Auckland, New Zealand, 2013  
**TELEPHONE NUMBER (New Zealand):** 0800 533 698; Fax: 0800 533 698  
**E-MAIL:** [tech@penriteoil.com](mailto:tech@penriteoil.com) (Aust and NZ)

**1.5 EMERGENCY TEL. NUMBER:** Australia: 1300 736 748; New Zealand: 0800 533 698  
(Poisons Information Centre (Aust 131 126; NZ 0800 764 766))

**1.6 HSNO DETAILS:**  
**HSNO APPROVAL NUMBER:** HSR002606.  
**HSNO GROUP TITLE:** Lubricants, Lubricant Additives, Coolants and Anti-Freeze Agents  
(Subsidiary Hazard) Group Standard, 2006.

## SECTION 2 – HAZARD(S) IDENTIFICATION

**2.1 CLASSIFICATION OF THE HAZARDOUS CHEMICAL:**  
**GHS CLASSIFICATION HAZARD**  
**CLASS & CATEGORY:** Under the Model Work Health and Safety Regulations the product would be rated as hazardous:  
Serious Eye Damage/Irritation - Category 2A  
Specific Target Organ Toxicity (Repeated Exposure) - Category 2

**2.2 LABEL ELEMENTS INCLUDING PRECAUTIONARY STATEMENTS:**  
**SIGNAL WORD:** Warning  
**PICTOGRAMS:** 

**HAZARD STATEMENTS:** H319 - Causes serious eye irritation.  
H373 - May cause damage to kidneys through prolonged or repeated exposure if swallowed.

**PRECAUTIONARY STATEMENTS:**  
**PREVENTION:** P102 - Keep out of reach of children.  
P103 - Read label before use.  
P260 - Do not breathe mist/vapour/spray.  
P264 - Wash hands thoroughly after handling.  
P280 - Wear eye protection/face protection.

**RESPONSE:** P101 - If medical advice is needed, have product container or label at hand.  
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P314 - Get medical advice/attention if you feel unwell.  
P337+P313 - If eye irritation persists: Get medical advice/attention.

**STORAGE:** Not Applicable.  
**DISPOSAL:** P501 - Dispose of contents/container in accordance with local regulations.

# SAFETY DATA SHEET

## SECTION 2 – HAZARD(S) IDENTIFICATION Continued

**2.3 OTHER HAZARDS:** This is a Schedule 5 Poison. Excessive exposure may result in mild irritation to the skin, eye or respiratory system. Prolonged or repeated contact may cause defatting of the skin which may lead to dermatitis. People with pre-existing skin conditions, such as eczema or dermatitis, should take precautions so as not to exacerbate the condition. As for all chemical products, persons should not expose open wounds, cuts, abrasions or irritated skin to this material.

## SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

| INGREDIENTS  | CAS NUMBER | Concentration<br>% W/W | GHS<br>Classification*                 |
|--|------------|------------------------|--|
| Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]- (Triethylene glycol monobutyl ether)<br>(Butyl triglycol) | 143-22-6   | 20% - < 30%            | Eye Dam 1 - H318                       |
| Ethanol, 2,2'-oxybis- (Diethylene glycol)  | 111-46-6   | 10% - < 25%            | Acute Tox 4 - H302<br>STOT RE 2 - H373 |
| Ethanol, 2-(2-methoxyethoxy)- (Diethylene glycol monomethyl ether)<br>(Methyl diglycol)          | 111-77-3   | < 2.5%                 | Toxic Repro 2 - H361d                  |
| Ethanol, 2-(2-butoxyethoxy)- (Diethylene glycol monobutyl ether)<br>(Butyl diglycol)             | 112-34-5   | < 2.5%                 | Eye Irrit 2A - H319                    |
| Denatonium Benzoate  | 3734-33-6  | 10mg/kg                | Not Applic                             |
| Other non-hazardous ingredients  | -          | To 100%                | Not Applic                             |

Not Applic = Not Applicable \*Please see Section 15 of this SDS for full text description of the Label Elements

## SECTION 4 – FIRST AID MEASURES

### 4.1 DESCRIPTION OF NECESSARY FIRST AID MEASURES:

**INGESTION:** For advice, contact a Poisons Information Centre (Phone Australia 131 126; New Zealand 0800 764 766) or a doctor. Rinse mouth out and give a glass of water. Never give fluid to a person exhibiting decreased awareness. Do NOT induce vomiting except under medical supervision. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. As the product contains glycol ethers if ingested seek medical assistance.

**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 after several minutes of rinsing by the exposed person or medical personnel if it can be done easily. As the product is an eye irritant, after flushing, if irritation develops or persists, seek medical assistance.

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

**INHALATION:** If affected, remove the patient from further exposure into fresh air, if safe to do so. If providing assistance, avoid exposure to yourself - only enter contaminated environments with adequate respiratory equipment. Once removed, lay patient down in a well-ventilated area and reassure them whilst waiting for medical assistance. If not breathing, provide artificial respiration and seek immediate medical assistance. If unconscious, place in a recovery position and seek immediate medical assistance. If irritation develops or persists, consult a Doctor.

# SAFETY DATA SHEET

## SECTION 4 – FIRST AID MEASURES Continued

**PROTECTION FOR FIRST AIDERS:**

No personnel shall place themselves in a situation that is potentially hazardous to themselves. Assess the scenario for PPE requirements before entering. Assess environment for vapours before entering. Do not enter contaminated area without a respirator. As the product contains Glycols, if the person has ingested the product, do not use direct mouth-to-mouth resuscitation techniques. Always ensure that you are wearing gloves when dealing with first aid procedures involving chemicals and/or blood.

**FIRST AID FACILITIES:** Eye wash fountain and safety showers are recommended in the area where the product is used.

**4.2 MOST IMPORTANT SYMPTOMS & EFFECTS, BOTH ACUTE & DELAYED, CAUSED BY EXPOSURE:**

**ACUTE:** Ingestion or inhalation of vapours may lead to irritation of the mouth and respiratory tract. Symptoms may include a burning sensation in the nose and throat, coughing or difficulty breathing. Ingestion may lead to nausea and diarrhoea. Eye contact may lead to localised burning, redness and tearing. Skin contact may lead to redness or itching.

**CHRONIC:** Skin contact may aggravate/exacerbate existing skin conditions, such as dermatitis. Prolonged or repeated contact may result in damage in kidneys.

**4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NECESSARY:**

**ADVICE TO DOCTOR:** Treat symptomatically.

## SECTION 5 – FIRE FIGHTING MEASURES

**5.1 EXTINGUISHING MEDIA:**

**SUITABLE MEDIA:** Use extinguishing media appropriate for surrounding fire. Use carbon dioxide, alcohol resistant foam, dry chemical or water spray. Spray down fumes resulting from fire.

**UNSUITABLE MEDIA:** Avoid using full water jet directed at residual material that may be burning. Water may cause splattering on hot residue.

**5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE:**

**COMBUSTION HAZARDS:** Combustion may produce oxides of carbon, as well as smoke and irritating vapours.

**5.3 ADVICE FOR FIREFIGHTERS:**

**FIRE:** The product is not flammable under conditions of use. This is a glycol-based liquid that will burn if preheated - Typical Flash Point >93°C. Keep storage tanks, pipelines, fire exposed surfaces, etc. cool with water spray.

**HAZCHEM CODE:** Not applicable.

**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.

**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.

# SAFETY DATA SHEET

## SECTION 6 – ACCIDENTAL RELEASE MEASURES

### 6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES:

**PERSONAL PROTECTION:** For small spills, wear Natural rubber, Butyl rubber, Nitrile or PVC 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. For large spills, or in confined spaces, a full chemically resistant body-suit is recommended and the atmosphere must be evaluated for oxygen deficiency. If in doubt about potential oxygen deficiency wear self-contained breathing apparatus.

**CONTROL MEASURES:** 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. Avoid contact with the spilled material.

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

### 6.2 ENVIRONMENTAL PRECAUTIONS:

**SPILL ADVICE:** Do not allow product to enter drains, surface water, sewers or watercourses - inform local authorities if this occurs.

### 6.3 METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP:

**CONTAINMENT:** Contain the spill and absorb with a proprietary absorbent material, sand or earth. For large spills prepare a bund/barrier/dyke ahead of the spill to confine the spill and allow later recovery. If there is the possibility of spills to enter drains, surface water, sewers or watercourses ensure bunding, or that drains are covered, to minimise the potential for this to occur.

**CLEANING PROCEDURES:** Having contained the spill, as mentioned above, collect all material quickly and place used absorbent in suitable containers. Follow local regulations for the disposal of waste. For large spills that have been banded, the material can be pumped into vessels and returned for reprocessing or destruction. 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. Do not allow wash water or rinsings to enter drains, surface water, sewers or water courses.

## SECTION 7 – HANDLING AND STORAGE, INCLUDING HOW THE CHEMICAL MAY BE SAFELY USED

### 7.1 PRECAUTIONS FOR SAFE HANDLING:

**SAFE HANDLING:** Avoid contact with the product by using appropriate protective equipment such as gloves, glasses or goggles and full-length clothing. Prevent small spills and leakage to avoid slip hazards. Properly dispose of any contaminated rags or cleaning materials in order to prevent fire hazards. 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. Remove contaminated clothing and protective equipment before entering eating areas. Keep containers tightly closed when not in use. Prevent product from entering waterways, drains or sewers.

### 7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES:

**SAFE STORAGE:** Store in a dry, well ventilated area away from direct sunlight, ignition sources, oxidising agents, foodstuffs, animal feed and clothing. Keep containers closed when not in use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Store only in original containers. Keep out of reach of children.

**INCOMPATIBILITIES:** Mineral oils and strong oxidizing substances including strong acids, as well as isocyanates.

# SAFETY DATA SHEET

## SECTION 8 – EXPOSURE CONTROLS & PERSONAL PROTECTION

### 8.1 EXPOSURE CONTROL MEASURES:

**EXPOSURE LIMIT VALUES:** Exposure standards for the product have not been established. However, in the operation of certain equipment or at elevated temperatures, if glycol vapours or mists are generated, the following Exposure Standard must be observed:

**Ethanol, 2,2'-oxybis- (Diethylene glycol)**

TWA: 23 ppm 100 mg/m<sup>3</sup>

**Ethanol, 2-(2-methoxyethoxy)- (Methyl Diglycol)** (HSE – EH40/2005)

TWA: 10 ppm 50 mg/m<sup>3</sup>

**Ethanol, 2-(2-butoxyethoxy)- (Butyl Diglycol)** (HSE – EH40/2005)

TWA: 10 ppm 67.5 mg/m<sup>3</sup> STEL: 15 ppm 101.2 mg/m<sup>3</sup>

### 8.2 BIOLOGICAL MONITORING:

No data available.

### 8.3 CONTROL BANDING:

No data available.

### 8.4 ENGINEERING CONTROLS:

**ENGINEERING CONTROLS:** Special ventilation is not normally required when using this product in normal use scenarios. However, in the operation of certain equipment, at elevated temperatures, or in confined spaces mists or vapour may be generated and local exhaust ventilation should be provided to maintain airborne concentration levels below the nominated exposure standard and at an acceptable level that does not cause irritation.

### 8.5 INDIVIDUAL PROTECTION MEASURES:

**EYE & FACE 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. Use eye protection in accordance with AS 1336 and AS 1337.

**SKIN (HAND) PROTECTION:** If there is the chance of contact with the material wear gloves to provide hand protection. Natural rubber, Butyl rubber, Nitrile or PVC gloves are recommended.

### SKIN (CLOTHING) PROTECTION:

During normal operating procedures, long sleeved clothing is recommended to avoid skin contact. Soiled clothing should be washed with detergent prior to re-use.

**RESPIRATORY PROTECTION:** During routine operation a respirator is not required. However, if mists or vapours are generated, an approved half face organic vapour/particulate respirator is required. Use respirators in accordance with AS 1715 and AS 1716.

**THERMAL PROTECTION:** Not applicable.

# SAFETY DATA SHEET

## SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 PHYSICAL AND CHEMICAL PROPERTIES:

|                           |                              |
|---------------------------|------------------------------|
| APPEARANCE:               | Amber liquid.                |
| ODOUR:                    | Minor odour.                 |
| ODOUR THRESHOLD:          | No data available.           |
| pH:                       | Typically 7.0 to 11.5.       |
| MELTING/FREEZING POINT:   | < -50°C.                     |
| INITIAL BOILING POINT:    | Typically > 205°C.           |
| BOILING RANGE (°C):       | No data available.           |
| FLASHPOINT (°C):          | Typically > 93°C             |
| EVAPORATION RATE:         | No data available.           |
| FLAMMABILITY LIMITS (%):  | No data available.           |
| VAPOUR PRESSURE:          | < 2 millibars.               |
| VAPOUR DENSITY:           | No data available            |
| DENSITY (kg/L @ 20°C):    | Typically 1.01 - 1.06.       |
| SOLUBILITY IN WATER(g/L): | Completely miscible.         |
| PARTITION COEFFICIENT:    | < 2.0 (all main components). |
| AUTO-IGNITION TEMP (°C):  | > 300°C.                     |
| DECOMPOSITION TEMP (°C):  | > 300°C.                     |
| VISCOSITY (cSt @ 100°C):  | Typically 2.2.               |
| VISCOSITY (cSt @ -40°C):  | Typically 1270.              |

## SECTION 10 – STABILITY AND REACTIVITY

- 10.1 REACTIVITY:** The product does not pose any further reactivity hazards other than those listed in the following sub-sections.
- 10.2 CHEMICAL STABILITY:** Stable under recommended storage and handling conditions (see section 7). The product will decompose at temperatures > 300°C.
- 10.3 POSSIBILITY OF HAZARDOUS REACTIONS:** Keep away from mineral oils, isocyanates and strong oxidising agents. Hazardous polymerisation does not occur. Glycol ethers can form peroxides on storage. They can also react with light metals with the evolution of hydrogen.
- 10.4 CONDITIONS TO AVOID:** Observe the usual precautionary measures for handling chemicals. Do not heat the container, leave it in direct sunlight or leave the container open when not in use. As there is the potential for peroxide formation with glycol ethers, never distil this product to dryness without testing for peroxide formation.
- 10.5 INCOMPATIBLE MATERIALS:** Strong oxidising agents including concentrated acids, isocyanates and mineral oils. As a general precaution never mix brake fluids with other materials.
- 10.6 HAZARDOUS DECOMPOSITION PRODUCTS:** Hazardous decomposition products are not expected to form during normal storage requirements. Extended storage may lead to the formation of peroxides in Glycol ethers as mentioned previously. See Section 5.2 for Hazardous Combustion products.

## SECTION 11 – TOXICOLOGICAL INFORMATION

### 11.1 INFORMATION ON TOXICOLOGICAL EFFECTS:

The product is a mixture and the manufacturer has nominated the following for the product:

Oral - LD<sub>50</sub> (Rat): >5000 mg/kg  
Dermal - LD<sub>50</sub> (Rabbit): >3000 mg/kg

#### **Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]- (Butyl Triglycol)**

Oral - LD<sub>50</sub> (Rat): >2000 mg/kg bw  
Dermal - LD<sub>50</sub> (Rat): >2000 mg/kg bw

# SAFETY DATA SHEET

## SECTION 11 – TOXICOLOGICAL INFORMATION Continued

### **Ethanol, 2,2'-oxybis- (Diethylene glycol)**

Oral - LD<sub>50</sub> (Rat): 15600 mg/kg bw

Dermal - LD<sub>50</sub> (Rabbit): 12500 mg/kg bw

Inhalation - LC<sub>50</sub> (Rat, aerosol, 4 hours): >4600 mg/m<sup>3</sup>

Inhalation - LC<sub>50</sub> (Mice, 2 hours): >130 mg/m<sup>3</sup>

### **Ethanol, 2-(2-butoxyethoxy)- (Butyl Diglycol)**

Oral - LD<sub>50</sub> (Rat): >2000 mg/kg bw

Dermal - LD<sub>50</sub> (Rat): >2000 mg/kg bw

### **Ethanol, 2-(2-methoxyethoxy)- (Methyl Diglycol)**

Oral - LD<sub>50</sub> (Rat): >5500 mg/kg bw

Dermal - LD<sub>50</sub> (Rabbit): >6540 mg/kg bw

Inhalation - LC<sub>50</sub> (Rat, vapour, 1 hour): >200 mg/L

### **Ethanol, 2,2'-oxybis- (Diethylene glycol)**

The NICNAS IMAP Report for Diethylene glycol nominates that incidents have been reported following human exposure. Typical features of acute toxicity include neurological impairment, metabolic acidosis and acute renal failure. Early mortality and morbidity are high, with most deaths occurring within the first two weeks following Diethylene glycol exposure. Humans appear to be 10 times more susceptible to acute oral toxic effects of Diethylene glycol compared with experimental animals. The median lethal dose for humans is reported as 1,490 mg/kg bw in the IMAP Report.

### **Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]- (Butyl Triglycol)**

The NICNAS IMAP Report for Butyl triglycol nominates that observed sublethal dose effects include lethargy, ataxia, blood in the urogenital area and piloerection.

### **Ethanol, 2-(2-butoxyethoxy)- (Butyl Diglycol)**

The NICNAS IMAP Report for Butyl diglycol nominates that observed sublethal dose effects include laboured breathing, rapid respiration, anorexia, slight to moderate weakness, tremors and prostration. According to the NICNAS IMAP Report, it has been estimated that a single lethal dose of Butyl diglycol for humans is approximately 1mL/kg. Cyanosis, tachypnoea and slight uraemia have also been reported in humans.

#### **11.2 SWALLOWED:**

The Ethanol, 2-(2-methoxyethoxy)- and the Ethanol, 2,2'-oxybis- with 10mg/kg of denatonium benzoate mean that this is a Schedule 5 Poison. The manufacturer states that if any significant amount of this product is ingested, there is a risk of renal damage which in extreme cases could lead to kidney failure, coma or death. Other symptoms of overexposure include Central Nervous System effects, abdominal discomfort, metabolic acidosis, headache and nausea. During normal usage ingestion should not be a means of exposure.

#### **11.3 SKIN CORROSION/ IRRITATION:**

This product is not expected to exhibit Dermal Corrosivity/Irritation according to OECD Test 404, based on the available data and the known hazards of the components. May be mildly irritating to the skin. The manufacturer states that extended contact with damaged skin could result in the absorption of harmful amounts. Prolonged or repeated contact may cause defatting of the skin which may lead to dermatitis. 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.

#### **11.4 SERIOUS EYE DAMAGE/ IRRITATION:**

The product is rated as Causes serious eye irritation. Symptoms may include localised burning, redness and tearing. Correct handling procedures incorporating appropriate eye protection should minimise the risk of eye irritation.

# SAFETY DATA SHEET

## SECTION 11 – TOXICOLOGICAL INFORMATION Continued

- 11.5 RESPIRATORY OR SKIN SENSITISATION:** This product is not expected to be a skin sensitiser according to OECD Test 406, based on the available data and the known hazards of the components. This product is not expected to be a respiratory tract sensitiser, based on the available data and the known hazards of the components.
- 11.6 GERM CELL MUTAGENICITY:** This product is not expected to be mutagenic according to tests such as OECD Tests 471, 475, 476, 478 and 479, based on the available data and the known hazards of the components.
- 11.7 CARCINOGENICITY:** This product is not expected to be a carcinogen according to OECD Test 451, based on the available data and the known hazards of the components.
- 11.8 REPRODUCTIVE TOXICITY:** This product is not expected to be a reproductive hazard according to tests such as OECD Tests 414 and 421, based on the available data and the known hazards of the components. The product contains Methyl Diglycol that is rated as Suspected of damaging the unborn child, however this is present at amounts below the Concentration cut-off levels where it would be considered to be a Reproductive Toxin.
- 11.9 SPECIFIC TARGET ORGAN TOXICITY (STOT) - SINGLE EXPOSURE:** This product is not expected to cause organ damage from a single exposure, based on the available data and the known hazards of the components. This product is not expected to pose an irritation hazard at ambient temperature or under normal handling conditions. Not classified as a respiratory irritant, however inhalation of vapours or mist (generated at elevated temperatures or by mechanical action) may cause irritation to the nose, throat and respiratory system.
- 11.10 SPECIFIC TARGET ORGAN TOXICITY (STOT) - REPEATED EXPOSURE:** The Diethylene glycol component means that this product is rated as May cause damage to kidneys through prolonged or repeated exposure if swallowed.
- 11.11 ASPIRATION HAZARD:** This product is not expected to be an aspiration hazard, based on the available data and the known hazards of the components.
- 11.12 OTHER INFORMATION:** No additional information is available.

## SECTION 12 – ECOLOGICAL INFORMATION

- 12.1 ECOTOXICITY:** The product is of low acute ecotoxicity. The manufacturer nominated the following for the product:  
LC<sub>50</sub> (Oncorhynchus Mykiss, 96hr): > 100 mg/L.
- 12.2 PERSISTENCE & DEGRADABILITY:** Based on the available data and the known hazards of the components and similar products the product is expected to be inherently biodegradable. Major constituents are expected to be readily biodegradable. According to Test OECD 302B (Zahn Wellans/EMPA) the result is 100% elimination at 21 days.
- 12.3 BIOACCUMULATIVE POTENTIAL:** Based on the available data and the known hazards of the components the manufacturer states that the product is not expected to bioaccumulate. Log Pow for all main components is < 2.0.
- 12.4 MOBILITY IN SOIL:** The product is soluble in water and will partition into the aqueous phase. The product will be mobile in soil until degraded.
- 12.5 OTHER ADVERSE EFFECTS:** There is no data available for the product as a whole.



# SAFETY DATA SHEET

## SECTION 13 – DISPOSAL CONSIDERATIONS

### 13.1 DISPOSAL METHODS:

**PRODUCT:**

The product should not be released to the environment, so any unused material should be recycled wherever possible or be disposed of as hazardous waste at an appropriate collection depot. The product is also suitable for incineration at very high temperatures to prevent formation of undesirable combustion products. Spilled product that cannot be recovered should be absorbed and then shovelled into a suitable waste container, such as a plastic drum and then be treated as a solid waste. Follow Government regulations for disposal of such waste. Do not mix new or used brake fluid with solvents, lubricating oils or coolants when disposing. All unused, waste or spilled product must be taken for recycling or disposal by suitably licensed contractors in accordance with Government regulations.

**CONTAINERS:**

Empty containers may contain residual product. They should be completely drained and then stored until reconditioned or disposed of. Empty drums should be taken for recycling or disposal through suitably licensed contractors in accordance with Government regulations. Where the containers are of metal construction they should not be pressurised, cut by a grinder, welded, brazed, soldered, drilled or exposed to heat, flames or other sources of ignition. Closed metal containers when exposed to such conditions/treatment may explode causing serious injury or death.

## SECTION 14 – TRANSPORT INFORMATION

This product is not regulated for land, sea or air transportation. (HS Code: 3819.00.00)

### 14.1 LAND (ADG Code):

**UN NUMBER:** Not applicable  
**UN PROPER SHIPPING NAME:** Not applicable  
**TRANSPORT HAZARD CLASS(ES):** Not applicable  
**PACKAGING GROUP:** Not applicable  
**ENVIRONMENTAL HAZARDS:** Not applicable  
**SPECIAL PRECAUTIONS FOR USER:** Not applicable  
**HAZCHEM CODE:** Not applicable

### 14.2 SEA (IMDG):

**UN NUMBER:** Not applicable  
**UN PROPER SHIPPING NAME:** Not applicable  
**TRANSPORT HAZARD CLASS(ES):** Not applicable  
**PACKAGING GROUP:** Not applicable  
**ENVIRONMENTAL HAZARDS:** Not applicable  
**SPECIAL PRECAUTIONS FOR USER:** Not applicable

# SAFETY DATA SHEET

## SECTION 14 – TRANSPORT INFORMATION Continued

**14.3 AIR (IATA):**  
**UN NUMBER:** Not applicable  
**UN PROPER SHIPPING NAME:** Not applicable  
**TRANSPORT HAZARD CLASS(ES):** Not applicable  
**PACKAGING GROUP:** Not applicable  
**ENVIRONMENTAL HAZARDS:** Not applicable  
**SPECIAL PRECAUTIONS FOR USER:** Not applicable

## SECTION 15 – REGULATORY INFORMATION

### 15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS:

#### APPLICABLE REGULATIONS:

**SUSMP:** Schedule 5 Poison (S5).  
**AICS:** All ingredients are on the AICS List.  
**MONTREAL PROTOCOL:** Not applicable to this product.  
**STOCKHOLM CONVENTION:** Not applicable to this product.  
**ROTTERDAM CONVENTION:** Not applicable to this product.  
**BASEL CONVENTION:** Not applicable to this product.  
**INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS (MARPOL):** Not determined.

#### OTHER REGULATORY INFORMATION:

#### GHS CLASSIFICATION HAZARD CLASS & CATEGORY

**AND HAZARD STATEMENT:** Acute Toxicity - Oral Category 4; H302 - Harmful if swallowed.  
Serious Eye Damage/Irritation Category 1; H318 - Causes serious eye damage.  
Serious Eye Damage/Irritation Category 2A; H319 - Causes serious eye irritation.  
Toxic to Reproduction Category 2; H361d - Suspected of damaging the unborn child.  
Specific Target Organ Toxicity (Repeated Exposure) Category 2; H373 - May cause damage to organs through prolonged or repeated exposure.

**HSNO APPROVAL NUMBER:** HSR002606.

**HSNO GROUP TITLE:** Lubricants, Lubricant Additives, Coolants and Anti-Freeze Agents (Subsidiary Hazard) Group Standard 2006.

# SAFETY DATA SHEET

## SECTION 16 – ANY OTHER RELEVANT INFORMATION

### SDS INFORMATION:

Date of SDS Preparation: 29<sup>th</sup> July 2016

Revision: 0.1

REVISION CHANGES: Changes to supplier information and addition of HSNO number in Section 1.

### ACRONYMS:

|              |  |
|--------------|--|
| SUSMP        | Standard for the Uniform Scheduling of Medicines and Poisons                               |
| CAS Number   | Chemical Abstracts Service Registry Number   |
| EINECS       | European Inventory of Existing Commercial Chemical Substances                              |
| UN Number    | United Nations Number  |
| OSHA         | Occupational Safety and Health Administration  |
| ACGIH        | American Conference of Governmental Industrial Hygienists                                  |
| HSE-WEL      | Health and Safety Executive - Workplace Exposure Limit                                     |
| IMDG         | International Maritime Dangerous Goods   |
| IATA         | International Air Transport Association  |
| IUCLID       | International Uniform Chemical Information Database  |
| RTECS        | Registry of Toxic Effects of Chemical Substances   |
| %W/W         | Percent weight for weight  |
| OECD         | Organisation for Economic Co-Operation and Development                                     |
| ADG Code     | Australian Code for the Transport of Dangerous Goods by Road and Rail                      |
| HAZCHEM Code | Emergency action code of numbers and letters which gives information to emergency services |
| NOHSC        | National Occupational Health and Safety Commission   |
| NICNAS       | National Industrial Chemicals Notification & Assessment Scheme                             |
| IMAP         | Inventory Multi-Tiered Assessment and Prioritisation                                       |
| AICS         | Australian Inventory of Chemical Substances  |
| TWA          | Time-Weighted Average  |
| STEL         | Short term Exposure Limit  |
| HSNO         | Hazardous Substances and New Organisms Act 1996  |
| GHS          | Globally Harmonised System of Classification and Labelling of Chemicals                    |
| WHS          | Work Health and Safety   |
| PPE          | Personal Protective Equipment.   |
| EH40         | EH40/2005 Workplace Exposure Limits  |

### LITERATURE REFERENCES AND SOURCES OF DATA:

OECD Guidelines for Testing of Chemicals  
Annex I: OECD Test Guidelines for Studies Included in SIDS  
Manual for the Assessment of Chemicals Chapter 2 Data Gathering  
International Toxicity Testing Guidelines  
Hazardous Substance Information System - Guidance Material for Hazard Classifications  
Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice.  
Model Work Health and Safety Regulations.  
Model Work Health and Safety Regulations - Transitional Principles  
Workplace Exposure Standards for Airborne Contaminants  
Australian Dangerous Goods Code 7<sup>th</sup> Edition  
Approved Criteria for Classifying Hazardous Substances [NOHSC:1008 (2004)]  
Guidance on the Classification of Hazardous Chemicals under the WHS Regulations  
Assigning a Hazardous Substance to a Group Standard  
User Guide to the HSNO Thresholds and Classifications  
Summary User Guide to the HSNO Thresholds and Classifications of Hazardous Substances  
Correlation between GHS and New Zealand HSNO Hazard Classes and Categories  
HSNO Control Regulations  
Record of Group Standard Assignment  
Labelling of Hazardous Substances Hazard and Precautionary Information  
Thresholds and Classifications Under the Hazardous Substances and New Organisms Act 1996  
Workplace Exposure Standards and Biological Exposure Indices  
NICNAS IMAP Human Health Tier II Assessment for Ethanol, 2,2'-oxybis- CAS Number: 111-46-6  
NICNAS IMAP Human Health Tier II Assessment for Ethanol, 2-(2-methoxyethoxy)- CAS Number: 111-77-3  
NICNAS IMAP Human Health Tier II Assessment for Ethanol, 2-(2-butoxyethoxy)- CAS Number: 112-34-5  
NICNAS IMAP Human Health Tier II Assessment for Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]- CAS Number: 143-22-6

# SAFETY DATA SHEET

## SECTION 16 – ANY OTHER RELEVANT INFORMATION Continued

All information contained in this 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.