



Material Safety Data Sheet

Product Name Full Stop Brake Fluid (DOT.4)

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Supplier Name TRU-BLU OIL AUSTRALIA PTY LTD
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Web Site <http://www.trubluoil.com.au/>
Synonym(s) DOT.4 Brake Fluid, DOT.4 Full Stop Brake Fluid
Use(s) Automotive Industry Brake Fluid
SDS Date 7th July 2020

2. HAZARDS IDENTIFICATION

NOT CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA

NOT CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE

UN No. None Allocated **DG Class** None Allocated **Subsidiary Risk(s)** None Allocated

Packing Group None Allocated **Hazchem Code** None Allocated

3. COMPOSITION/ INFORMATION ON INGREDIENTS

Ingredient	Formula	CAS No.	Content
Diethylene Glycol	C4-H10-O3	111-46-6	1-5%
Triethylene Glycol Methyl Ether	Not Available	112-35-6	10-30%
Triethylene Glycol	C6-H14-O4	112-27-6	1-5%
Triethylene Glycol Mono-N-Butyl Ether	Not Available	143-22-6	1-5%

4. FIRST AID MEASURES

Eye Flush gently with running water for 15 minutes.
Skin Remove contaminated clothing and gently flush affected areas with water. Seek medical attention if irritation develops. Launder clothing before reuse.
Inhalation If over exposure occurs, leave exposure area immediately. If irritation persists, seek medical attention.
Ingestion For advice, contact a Poison Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). If swallowed, do not induce vomiting.
Advice to Doctor The manufacturer recommends to treat symptomatically. Following ingestion this product is likely to hydrolyse to form a polyglycol ether and boric acid. For glycol ethers: blockade of alkoxyacetic acid metabolite may follow competitive inhibition of alcohol dehydrogenase with ethanol or 4-methylpyrazole. Maintain a plasma ethanol level of 100150 mg/dL. For boric acid: there is no specific antidote.

First Aid Facilities Eye wash facilities and safety shower should be available.

5. FIRE FIGHTING MEASURES

Flammability	Non flammable. May evolve toxic gases (carbon oxides, hydrocarbons) when heated to decomposition.
Fire and Explosion	Non flammable. Evacuate area and contact emergency services. Toxic gases (carbon oxides, hydrocarbons) may be evolved when heated. Remain upwind and notify those downwind of hazard. Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) when combating fire. Use waterfog to cool intact containers and nearby storage areas.
Extinguishing	Non flammable. Prevent contamination of drains or waterways, absorb runoff with sand or similar.
Hazchem Code	None Allocated

6. ACCIDENTAL RELEASE MEASURES

Spillage	If spilt (bulk), contact emergency services where appropriate. Wear splash-proof goggles, PVC/rubber gloves, a Type A (Organic vapour) respirator (where an inhalation risk exists) and coveralls. Absorb spill with sand or similar, collect and place in sealable containers for disposal. CAUTION: spill site may be slippery.
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7. STORAGE AND HANDLING

Storage	Store in a cool, dry, well-ventilated area, removed from oxidising agents, acids, and foodstuffs. Ensure containers are adequately labelled, protected from physical damage and sealed when not in use. Store as a Class C1 Combustible Liquid (AS1940).
Handling	Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

Exposure Standards

Ingredient	Reference	TWA		STEL	
2,2'-Oxybis[ethanol]	NOHSC (AUS)	23 ppm	5 mg/m ³	--	--

Biological Limits No biological limit allocated.

Engineering Use with adequate natural ventilation. Open windows and doors where possible. In poorly ventilated areas, mechanical extraction ventilation is recommended.

PPE Wear splash-proof goggles and PVC or rubber gloves. When using large quantities or where heavy contamination is likely, wear: coveralls. Where an inhalation risk exists, wear: a Type A (Organic vapour) respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Green Liquid	Solubility (Water)	Soluble
Odour	Slight Odour	Specific Gravity	Not Available
pH	Not Available	% Volatiles	Not Available
Vapour Pressure	Not Available	Flammability	Class C1 Combustible
Vapour Density	Not Available	Flash Point	>130°C
Boiling Point	Not Available	Upper Explosion Limit	Not Available
Melting Point	Not Available	Lower Explosion Limit	Not Available
Evaporation Rate	Not Available	Autoignition Temperature	Not Available

10. STABILITY AND REACTIVITY

Material to Avoid Incompatible with oxidising agents (eg. peroxides) and acids (eg. hydrochloric acid).

Hazardous Decomposition Products May evolve toxic gases (carbon oxides, hydrocarbons) when heated to decomposition.

11. TOXICOLOGICAL INFORMATION

Health Hazard Summary Low to moderate toxicity - irritant. Use safe work practices to avoid eye or skin contact or vapour generation – inhalation. Due to the low vapour pressure of this product an inhalation hazard is not anticipated unless heated, sprayed or used in poorly ventilated areas. Chronic over exposure to glycols or glycol ethers may result in liver and kidney damage.

Eye Irritant. Exposure may result in lacrimation, irritation, pain and redness.

Inhalation Low to moderate toxicity - low irritant. Due to the low vapour pressure of glycol ethers, an inhalation hazard is only anticipated when heated or sprayed. Exposure at high levels may result in headache and nausea. Chronic over exposure to glycols may result in liver and kidney damage.

Skin Irritant. Prolonged contact may result in irritation, rash and dermatitis. The manufacturer reports that the dermal LD50 (rat) is expected to be > 2000 mg/kg (based on testing using similar products).

Ingestion Low to moderate toxicity. Ingestion may result in nausea, vomiting, gastrointestinal irritation and diarrhoea.

Toxicity DIETHYLENE GLYCOL (111-46-6)
LD50 (Ingestion): 3300 mg/kg (cat)
LD50 (Skin): 11890 mg/kg (rabbit)
TRIETHYLENE GLYCOL METHYL ETHER (112-35-6)
LD50 (Ingestion): 11300 mg/kg (rat)
LD50 (Skin): 7100 mg/kg (rabbit)
TRIETHYLENE GLYCOL (112-27-6)
LD50 (Ingestion): 8400 mg/kg (rabbit)
LD50 (Skin): > 20 mL/kg (rabbit)
TRIETHYLENE GLYCOL MONO-N-BUTYL ETHER (143-22-6)
LD50 (Ingestion): 5300 mg/kg (rat)
LD50 (Skin): 3.54 ml/kg (rabbit)

12. ECOLOGICAL INFORMATION

Environment ATMOSPHERE: Vapour phase glycols are expected to degrade fairly rapidly by reaction with hydroxyl radicals (eg half-life 32 hours for propylene glycol). Removal from air by rainfall is possible. WATER: Should degrade relatively rapidly via biodegradation. SOIL: If released to soil, relatively rapid biodegradation should also occur. Leaching to groundwater may occur.

13. DISPOSAL CONSIDERATIONS

Waste Disposal For small amounts, absorb with sand, vermiculite or similar and dispose of to an approved landfill site. For larger amounts, contact the manufacturer for additional information. Prevent contamination of drains or waterways as aquatic life may be threatened and environmental damage may result.

Legislation Dispose of in accordance with relevant local legislation.

14. TRANSPORT INFORMATION

NOT CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE

Shipping Name	None Allocated	Packing Group	None Allocated	Hazchem Code	None Allocated
UN No.	None Allocated	DG Class	None Allocated	Subsidiary Risks(s)	None Allocated

15. REGULATORY INFORMATION

Poison Schedule A poison schedule number has not been allocated to this product using the criteria in the Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP).

AICS All chemicals listed on the Australian Inventory of Chemical Substances (AICS).

16. OTHER INFORMATION

Additional Information

RESPIRATORS: In general the use of respirators should be limited and engineering controls employed to avoid exposure. If respiratory equipment must be worn ensure correct respirator selection and training is undertaken. Remember that some respirators may be extremely uncomfortable when used for long periods. The use of air powered or air supplied respirators should be considered where prolonged or repeated use is necessary.

ABBREVIATIONS: ADB - Air-Dry Basis.
BEI - Biological Exposure Indice(s)
CAS# - Chemical Abstract Service number - used to uniquely identify chemical compounds.
CNS - Central Nervous System.
EC No - European Community Number.
IARC - International Agency for Research on Cancer.
M - moles per litre, a unit of concentration.
mg/m³ - Milligrams per cubic metre.
NOS - Not Otherwise Specified.
NTP - National Toxicology Program.
OSHA - Occupational Safety and Health Administration.
pH - relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline). ppm - Parts Per Million.
RTECS - Registry of Toxic Effects of Chemical Substances.
TWA/ES - Time Weighted Average or Exposure Standard.

HEALTH EFFECTS FROM EXPOSURE:

It should be noted that the effects from exposure to this product will depend on several factors including: frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a MSDS which would encompass all possible scenarios, it is anticipated that the end user will assess the risks and apply control methods where appropriate.

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:

The recommendation for protective equipment contained within this MSDS is provided as a guide only. Factors such as method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered by the end user before final selection of personal protective equipment is made.

REPORT STATUS:

This MSDS has been prepared by Tru-Blu Oil using the most current information available at the time of issuing. Tru-Blu Oil accepts no liability (as lawfully allowed) for any loss, injury or damage which may have been suffered or incurred by any person as a consequence of their reliance on information that is contained in this MSDS.

MSDS Date: 7th July 2020

End of MSDS