



Material Safety Data Sheet

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER:

Product Name: **Fortron ONE SHOT GLYCOL BASED COOLANT**

Other Names: **ONE SHOT GLYCOL BASED COOLANT
FOS1 – 1 litre plastic container
FOS20 – 20 litre plastic container**

Recommended Use: One Shot is a Hybrid style coolant containing a premium blend of ethylene glycol and corrosion inhibitors, giving maximum protection for all types of motor vehicles.

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2. HAZARDS IDENTIFICATION:

HAZARDOUS ACCORDING TO CRITERIA OF WORKSAFE AUSTRALIA

Hazard Identification: Xn Harmful

Risk Phrase: R22 Harmful if swallowed

Safety Phrase: S2 Keep out of the reach of children
S20 When using do not eat or drink
S24/24 Avoid contact with skin and eyes

3. COMPOSITION/INFORMATION ON INGREDIENTS:

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Proportion % w/w</u>
1,2-ethanediol	107-21-1	> 60%
Potassium Borate		
Triethanolamine Phosphate		



4. FIRST AID MEASURES:

Swallowed: If swallowed immediately rinse mouth with water. Give plenty of water to drink. If more than 15 minutes from a hospital INDUCE vomiting using fingers in the throat or Ipecac Syrup APF. Seek immediate medical advice.

For advice, contact a Poisons Information Centre. Phone Australia 13 1126; New Zealand 03 4747 000 (Not after May 2005) or 0800 764 766; or a doctor (at once).

Eye: If contact with the eye(s) occurs, immediately hold the eye open and wash continuously for at least 15 minutes with fresh running water. Ensure irrigation under eyelids by occasionally lifting the upper and lower lids. If symptoms persist seek medical advice.

Skin: Wash contaminated skin with soap and water. Remove contaminated clothing and wash before re-use. If irritation occurs seek medical advice.

Inhaled: Remove victim from exposure – avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm.

Keep at rest until fully recovered. If breathing is laboured and patient cyanotic (blue), ensure airways are clear and have qualified person give oxygen through a facemask.

If breathing has stopped apply artificial respiration at once. In event of cardiac arrest, apply external cardiac massage. Seek medical advice.

First Aid Facilities: Safety shower, mild soap and eye wash facilities.

Advice to Doctor: Treat symptomatically and as for exposure to ethylene glycol.

5. FIRE FIGHTING MEASURES:

Extinguishing Media In case of fire, use water spray, water fog, foam, carbon dioxide or dry chemical powder.

Unusual Fire & Explosion Hazards: Combustible Liquid.

Fire Fighting Precautions: Fire fighters to wear self-contained breathing apparatus if risk of exposure to vapour or products of combustion.

Hazchem Code: Not applicable



6. ACCIDENTAL RELEASE MEASURES:

Emergency Procedures: Shut off all possible sources of ignition. Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contamination.

Methods and Materials for Containment and Clean Up: Small Spills/Large Spills: Contain using sand or soil – prevent run off into drains and waterway. Use absorbent (soil, sand, vermiculite or other inert material). Collect and seal in properly labelled containers for disposal.

Dispose according to State Land Management Authority regulations.

7. HANDLING AND STORAGE:

Precautions for Safe Handling: Avoid prolonged or repeated skin contact and inhalation of vapour or aerosols. Wear overall, safety shoes, goggles and neoprene, PVC or natural rubber gloves. If inhalation risk exists wear organic vapour or organic vapour/particulate respirator meeting the requirements of AS1715 and AS1716. Always wash hands before smoking, eating, drinking or using the toilet.

Conditions for Safe Storage: Store in a cool, dry place and out of direct sunlight. Store away from oxidising agents, foodstuffs, and sources of heat or ignition.

Classified as 3.3 (Combustible Liquid) Dangerous Substance for the purpose of transport.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

National Exposure Standards:	SUBSTANCE	Occupational Exposure Limits	TWA
	Ethylene Glycol	mg/m ³	60

Exposure Standard means the average concentration of a particular substance in the worker's breathing zone, exposure to which, according to current knowledge, should not cause adverse health effects nor cause undue discomfort to nearly all workers. It can be of three forms; time-weighted average (TWA), peak limitation, or short term exposure limit (STEL).

Time-weighted average (TWA) is defined as the concentration of that substance over an eight-hour working shift, and apply to an eight-hour day, for a five-day working week over an entire working lifetime. Short Term Exposure Limits (STEL) and Peak Limitations may also be specified for short periods of exposure such as 15 minutes.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION: - continued

Engineering Controls: Ensure good ventilation. In industrial situations, concentration values below the TWA value should be maintained. Values may be reduced by process modification, use of local ventilation, capturing substances at the source, or other methods. If you believe air borne concentrations of mists, dusts or vapours are high; you are advised to modify the process or environment to reduce the problem.

Personal Protective Equipment: Avoid prolonged or repeated skin contact and inhalation of vapour or aerosols. Wear overalls, safety shoes, goggles and neoprene, PVC or natural rubber gloves. If inhalation risk exists wear organic vapour or organic vapour/particulate respirator meeting the requirements of AS1715 and AS1716. Always wash hands before smoking, eating, drinking or using the toilet.

Hygiene Recommendations: Safety shower, mild soap and eye wash facilities.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance:	Clear green mobile liquid
Odour:	Not applicable
pH:	7.0 – 8.0
Vapour Pressure:	0.06 mmHg @ 20°C
Vapour Density:	2.1
Boiling Point:	190°C
Melting Point:	-13°
Solubility in Water:	Soluble
Specific Gravity:	1.1 approx
Flashpoint:	116° C
Flammability Limits:	LEL 3.2% UEL 15.3
Volatiles:	0%

10. STABILITY AND REACTIVITY:

Chemical Stability: Stable under normal conditions of use.

Conditions to Avoid: Sources of heat and ignition.

Incompatible Materials: Store away from oxidising agents, foodstuffs and sources of heat or ignition.

Hazardous Decomposition Products: Not applicable.

Hazardous Reactions:

11. TOXICOLOGICAL INFORMATION:

HUMAN HEALTH HAZARDS - ACUTE

- Swallowed: Initial symptoms following a large dose (>100ml) are those of alcohol intoxication, progressing to vomiting, cyanosis, headache, pulmonary oedema, muscle tenderness, stupor, convulsions and unconsciousness. Death may occur within a few hours from respiratory failure or with 24 hours from pulmonary oedema.
- Eye: A mild irritant. Can cause transient conjunctivitis.
- Skin: Will degrease the skin. Repeated or prolonged skin contact may lead to mild irritation. Can be absorbed through the skin but not readily absorbed in toxic amounts (symptoms may be similar to those described for "Swallowed").
- Inhaled: Not a risk due to low vapour pressure at ambient temperatures. Inhalation of vapours, mists or aerosols can produce respiratory irritation. Headache and low backache have also been reported. High concentrations may cause drowsiness and irregular eye movements.
- Chronic: Toxic to kidneys and liver.
- Oral: LD50 (rat) : 4464 mg/kg
Lowest Toxic Dose (human) : 15 mg/kg
Lowest Lethal Dose (human) : 400 mg/kg – headache, nausea, vomiting
Estimated Lethal Dose (human) : 100 ml
- Inhalation: Lowest Toxic Concentration (human) : 10,000 mg/m³ - cough, lachrymation
- Skin: (Rabbit) mild irritant
Dermal LD50 (rabbit) : 9053 mg/kg
- Eyes: Mild irritant
- The brain, lungs liver and kidneys are the main organs affected by systemic intoxication and renal failure is the usual cause of death. Treatment is as for oxalate poisoning, as ethylene glycol is metabolised to oxalic acid, which is deposited in various organs as calcium oxalate crystals.
- Animal Studies: Animal studies have shown that long term repeated exposure to high doses of ethylene glycol in the diet causes kidney injury.
- Not mutagenic in several *in vitro* mutagenicity studies.
- Birth defects have been observed when ethylene glycol was administered to pregnant mice or rats in high doses in the diet or as a respirable aerosol. No effects were noted in the reproductive systems neither of male or female mice or rats nor on their reproductive performance.

Several long term animal tests have found no carcinogenic effects.



12. ECOLOGICAL INFORMATION:

Ecotoxicity: Environmental Impact : Aquatic Toxicity : TIm 96:1,000 – 100ppm.

Persistence and Degradability: None established for this product.

Mobility: None established for this product.

13. DISPOSAL CONSIDERATIONS:

Disposal Methods and Containers: Contain using sand or soil – prevent run off into drains and waterways. Use absorbent (soil, sand, vermiculite or other inert material). Collect and seal in properly labelled containers for disposal.

Dispose according to State Land Management Authority regulations.

Special Precautions for Landfill or Incineration: No special requirements.

14. TRANSPORT INFORMATION:

UN Number: None Allocated

UN Proper Shipping Name: None Allocated

Class and Subsidiary Risk: None Allocated

Packaging Group: None Allocated

Special Precaution for user: None Allocated

Hazchem Code: None Allocated

Poisons Schedule: S5

No regulatory requirements apply to the transport of this product.

15. REGULATORY INFORMATION:

Hazardous according to criteria of Worksafe Australia



16. OTHER INFORMATION:

Date of Issue: 1st October 2008
MSDS Number: MSDS:195
Issue Number: C

Please Note:

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