

MATERIAL SAFETY DATA SHEET

This substance is classified as **Hazardous** according to the criteria of Worksafe Australia

ECO FREEZE OE AOC5005 LONG LIFE HYBRID (NITRITE) COOLANT CONCENTRATE

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND COMPANY

Product Name	ECO FREEZE OE Long Life Hybrid (Nitrite Coolant Concentrate)
Product Code	AOC5005
Product Use	Engine Cooling System Treatment
Company Name	Australian Organic Coolants
Address	110 Scott Street, Bungalow, Qld, 4870
Telephone	61 7 4051 2400
Fax	61 7 4031 5490
Other Names	
Other Information	

2. COMPOSITION / INFORMATION ON INGREDIENTS

Information on Composition	Chemical Entity	CAS number	Proportion
	Ethylene Glycol	107-21-1	>60%
	Denatonium Benzoate	3437-33-6	<1%
	Other ingredients determined not to be hazardous		

3. HAZARDS IDENTIFICATION

Human Health Hazards	ACUTE
Eyes	Can cause moderate irritation
Skin	Can cause moderate irritation
Ingestion	Harmful if swallowed. Large quantities may cause kidney damage. Irritation of the gastrointestinal tract may occur with nausea and vomiting.
Inhalation	Not a likely route of exposure. Mists or vapours may be irritating to eyes, nose throat and lungs.
Human Health Hazards	CHRONIC
	Contains mono ethylene glycol, which is toxic when swallowed. 100ml is considered a lethal dose for an adult. Repeated exposure to high doses by ingestion (animal studies) has caused kidney, liver and central nervous system damage.

4. FIRST AID MEASURES

Eye Contact	Wash eye thoroughly with copious quantities of water, ensuring eyelids are held open for at least 15 minutes. Obtain medical attention if irritation continues.
Skin Contact	Wash skin with soap and water as soon as reasonably practicable. Remove contaminated clothing. Seek medical attention.
Ingestion	If a significant quantity has been swallowed, do not induce vomiting. Give 2 glasses of water. Seek medical attention.
Inhalation	If inhalation of mists, fumes or vapour causes irritation to the nose or throat, or coughing, remove to fresh air. If symptoms persist obtain medical advice.
Advice to Doctor	Treatment should in general be symptomatic and directed to relieving any effects.

5. FIRE FIGHTING MEASURES

Flash Point	Non flammable
Extinguishing Media	Choice of extinguishing media should be made by what other materials are present.
Fire and Explosion Hazard	Combustible – oxides of carbon may be evolved after evaporation of all the water.
Special Protective Equipment for Fire Fighting	In case of fire, wear a full face self-contained breathing apparatus and protective suit.



6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Restrict access to area affected until clean-up is completed. Use personal protective equipment as detailed in section 8. Do not touch spilled material. Emergency equipment should be available. Notify appropriate authorities.
Skin Environmental Precautions	Do not contaminate surface waters – depletion of oxygen in the water will occur. Soak up spilled material using sand or other suitable inert absorbent material. Place residues in a suitably marked sealed container.
Clean Up Methods	Protect drains from potential spills to minimize contamination. In the case of large spills contact the appropriate authorities

7. HANDLING AND STORAGE

Handling	Use with adequate ventilation. Avoid contact with eyes. If splashing is likely to occur wear a full face visor or chemical goggles as appropriate.
Storage	Avoid frequent or prolonged skin contact. Wear PVC or similar gloves. Store only in original or approved containers. Store away from oxidizers.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Occupational Exposure Limits	TWA mg/m ³	STEL mg/m ³	PEAK/CEILING ppm	PEAK/CEILING mg/m ³
Ingredient Name				
Ethylene glycol (vapour)	60	120		
Ethylene glycol			50	125
Engineering Measures	Local exhaust ventilation should be provided.			
Personal Protection	Eyes Use chemical splash goggles.			
	Skin Wear standard protective clothing.			
	Hands Wear any impervious gloves.			
	Respiratory Respiratory protection is not generally needed. If ventilation is inadequate, use respirator that will protect against dusts and mists. Respiratory protection should confirm to AS/NZS 1715 & AS/NZS 1716.			

9. PHYSICAL AND CHEMICAL PROPERTIES

Odour	Slight
Boiling Point	N/A
pH Value	6.0 – 7.0 (as supplied)
Vapour Pressure	N/A
Physical State	Liquid
Colour	Pale Green
Density	1.131 – 1.133

10. STABILITY AND REACTIVITY

Hazardous Polymerisation	Hazardous polymerization reactions will not occur.
Materials to Avoid	Strong oxidizers
Hazardous Decomposition Product	Oxides of carbon
Conditions to Avoid	Products of this type are stable and unlikely to react in a hazardous manner under normal conditions of use. This material is combustible after evaporation of the aqueous component.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY DATA	
The following results are for Ethylene Glycol.	
Acute Oral Toxicity	LD50 (Rat) 4700mg/kg Lowest lethal dose (human) 786mg/kg Estimated lethal dose (human) 100ml
Acute Dermal Toxicity	LD50 (Rabbit) 9350mg/kg
Acute Inhalation Toxicity	(Rat) >5mg/kg
SENSITIZATION	
This product is not expected to be a sensitizer.	
CHRONIC TOXICITY	
Contains ethylene glycol. Repeated high ingested doses of ethylene glycol in animal studies brain damage, kidney damage, degeneration of the liver and changes in blood chemistry. Similar effects may be caused in humans by repeated and/or prolonged exposure.	
This product does not contain any substances that are listed as carcinogens.	
CARCINOGENICITY	
TERATOGENICITY	
Ethylene glycol has been shown to produce teratogenic effects in mice when high doses were ingested.	



12. ECOLOGICAL INFORMATION

Ecotoxicity	No ecotoxicity studies have been done on this product. Ethylene glycol is classified as "readily" biodegradable according to the guidelines of the OECD.
Mobility	Not determined.
Bioaccumulation	Ethylene glycol does not bioaccumulate.

13. DISPOSAL CONSIDERATIONS

Dispose of via an authorized person/licensed waste disposal contractor in accordance with local regulations.
Dispose of product and container carefully and responsibly.
Do not dispose of near ponds, ditches, down drains or onto soil.

14. TRANSPORT INFORMATION

	Not classified as a dangerous good according to the criteria of the ADG Code.
UN Number	None allocated
Proper Shipping Name	None allocated
DG Class	C1 – Combustible Liquid
Hazchem Code	None allocated
Packing Group	

15. REGULATORY INFORMATION

POISON SCHEDULE	5
Hazardous according to the criteria of the	National Health and Occupational Health and Safety Commission
Classification	Xn – harmful R22 – harmful if swallowed
Risk Phrases	R36/37/38 irritating to eyes, respiratory system and skin
Safety Phrases	S2 KEEP OUT OF REACH OF CHILDREN S24/25 avoid contact with skin and eyes S37/39 wear suitable gloves and eye protection S45 in case of accident or if you feel unwell, seek medical advice immediately.

16. OTHER INFORMATION

Important Information This MSDS summarizes our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including its use in conjunction with other products. If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact Australian Organic Coolants. Our responsibility for products sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available on request.

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END OF MSDS

