



PRODUCT NAME **PCOOL**

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Supplier Name AUSTRALIAN AUTOMOTIVE DISTRIBUTION
Address 2-10 Bliss Court, VIC AUSTRALIA, 3030
Telephone (03) 8369 1300
Fax (03) 8369 1475
Emergency (03) 8369 1300
Email info@aad.com.au

Synonym(s) PCOOL - PRODUCT CODE
Use(s) AUTOMOTIVE APPLICATIONS • ENGINE COOLANT
MSDS Date 06 August 2017

2. HAZARDS IDENTIFICATION

CLASSIFIED AS HAZARDOUS ACCORDING TO NOHSC CRITERIA

RISK PHRASES

R22 Harmful if swallowed.

SAFETY PHRASES

S2 Keep out of reach of children.

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
Pkg Group	None Allocated	Hazchem Code	None Allocated	EPG	None Allocated

3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	Formula	CAS No.	Content
ETHYLENE GLYCOL	C2-H6-O2	107-21-1	>60%
CORROSION INHIBITOR(S)	Not Available	Not Available	<10%
ANTI-FOAM	Not Available	Not Available	<1%
BITREX	C21-H29-N2-O.C7-H5-O2	3734-33-6	<1%
DYE	Not Available	Not Available	<1%

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4. FIRST AID MEASURES

Eye	Flush gently with running water for 15 minutes.
Inhalation	Leave area of exposure. If symptoms develop, seek urgent medical attention. If assisting a person exposed, wear a Type A (Organic vapour) respirator (or Air-line respirator in poorly ventilated areas). If person is not breathing, apply artificial respiration and seek urgent medical attention.
Skin	Remove contaminated clothing and gently flush affected areas with water. Seek medical attention if irritation develops. Launder clothing before reuse.
Ingestion	For advice, contact a Poison Information Centre on 13 11 26 (Australia Wide) or a doctor.
Advice to Doctor	Treat symptomatically

5. FIRE FIGHTING MEASURES

Flammability	Combustible liquid - explosive vapour. May evolve toxic gases (carbon oxides, hydrocarbons) when heated to decomposition. Low volatility reduces fire - explosive potential.
Fire and Explosion	Combustible - explosive vapour. Evacuate area and contact emergency services. Toxic gases (hydrocarbons, carbon oxides) may be evolved when heated. Remain upwind and notify those downwind of hazard. Wear full protective equipment (see spill above) including Self Contained Breathing Apparatus (SCBA) when combating fire. Use waterfog to cool intact containers.
Extinguishing	Dry agent, carbon dioxide or foam. 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, butyl (first choice) or rubber/neoprene gloves, a Type A (Organic vapour) respirator, coveralls and boots. Ventilate and clear area of all unprotected personnel. Prevent spill entering drains or waterways. Absorb spill with sand or similar, collect and place in sealable containers for disposal.
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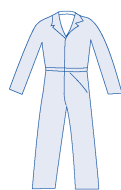
7. STORAGE AND HANDLING

Storage	Store in cool, dry, well ventilated area, removed from oxidising agents (eg. potassium permanganate, peroxides), acids (eg. sulphuric acid), phosphorus pentasulphide, sodium hydroxide, foodstuffs, heat or ignition sources. Ensure containers are adequately labelled, protected from physical damage and sealed when not in use. Check regularly for spills or leaks. 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	
			ppm	mg/m3	ppm	mg/m3
	Ethylene glycol (vapour)	NOHSC (AUS)	20	52	40	104
Biological Limit Values	No biological limit allocated.					
Engineering Controls	Use with adequate natural ventilation. Open windows and doors where possible. In poorly ventilated areas, mechanical extraction ventilation is recommended. Maintain vapour levels below the recommended exposure standard.					
PPE	Wear splash-proof goggles, neoprene or butyl or rubber gloves and coveralls. Where an inhalation risk exists, wear a Type A (Organic vapour) Respirator. If spraying, wear a Type A-Class P1 (Organic gases/vapours and Particulate) Respirator.					

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9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	GREEN LIQUID (1 L, 5 L, 20 L, 200 L AND 1000 L CONTAINER)	Solubility (water)	SOLUBLE
Odour	SLIGHT ODOUR	Specific Gravity	1.121
pH	10.2 - 10.6	% Volatiles	NOT AVAILABLE
Vapour Pressure	NOT AVAILABLE	Flammability	CLASS C1 COMBUSTIBLE
Vapour Density	NOT AVAILABLE	Flash Point	126°C
Boiling Point	155°C	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, potassium permanganate, ammonium dichromate), acids (eg. sulphuric acid), sodium hydroxide and phosphorus pentasulphide.
Decomposition	May evolve toxic gases (carbon oxides, hydrocarbons) when heated to decomposition.

11. TOXICOLOGICAL INFORMATION

Health Hazard Summary	Moderate toxicity. This product has the potential to cause acute and chronic health effects with over exposure. Use safe work practices to avoid eye or skin contact and vapour/mist inhalation. At room temperature ethylene glycol has a low vapour pressure and therefore an inhalation hazard is not anticipated unless heated or sprayed. Chronic or high level acute over exposure may result in kidney and central nervous system damage.
Eye	Low to moderate irritant. Exposure may result in irritation, pain and redness.
Inhalation	Low irritant - narcotic. Due to the low vapour pressure of ethylene glycol, an inhalation hazard is only anticipated if heated or sprayed. Over exposure may cause mild respiratory irritation with central nervous system (CNS) depression. Symptoms may include headache, nausea, dizziness and unconsciousness at very high levels.
Skin	Irritant. Prolonged and repeated contact may result in drying and defatting of the skin with rash and dermatitis.
Ingestion	Moderate toxicity. Ingestion may result in nausea, vomiting, abdominal pain, diarrhoea, drowsiness and unconsciousness. Chronic exposure may cause kidney damage. Aspiration may result in chemical pneumonitis and pulmonary oedema.
Toxicity Data	ETHYLENE GLYCOL (107-21-1) LC50 (Inhalation): 10 876 mg/kg (rat) LD50 (Ingestion): 1650 mg/kg (cat) LD50 (Skin): 9530 ug/kg (rabbit) BITREX (3734-33-6) LD50 (Ingestion): 508 mg/kg (rabbit)

12. ECOLOGICAL INFORMATION

Environment	Ethylene glycol will mainly exist in the vapour phase in the ambient atmosphere where it will be degraded by reaction with hydroxyl radicals. Expected to be very highly mobile in soil. Not anticipated to volatilise from moist soil or water surfaces. Biodegradation in both soil and water is expected to be a major fate process for this compound. Not expected to bioconcentrate in aquatic organisms.
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13. DISPOSAL CONSIDERATIONS

Waste Disposal	Dispose of by controlled incineration, by licensed or competent personnel. Contact the manufacturer for additional information. Prevent contamination of drains and waterways as aquatic life may be threatened and environmental damage may result.
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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				
UN No.	None Allocated	DG Class	None Allocated	Subsidiary Risk(s)	None Allocated
Pkg Group	None Allocated	Hazchem Code	None Allocated	EPG	None Allocated

15. REGULATORY INFORMATION

Poison Schedule Classified as a Schedule 5 (S5) Poison 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 ETHYLENE GLYCOL: Has been reported to cause teratogenic and mutagenic effects, however the doses recorded for these effects are extremely high. For example experimental rat studies by the oral route have shown that ingestion of 8.5 g/kg by pregnant rats in their 6-15 day of gestation caused teratogenic effects. This equates to the ingestion of 500 ml of ethylene glycol by a 60 kg women for similar effects to occur. Exposure at such levels is not reported in industry.

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.

STORAGE OF COMBUSTIBLE LIQUIDS. Combustible liquids with a flash point between 61C and 150C are required to be stored as for flammable liquids (Dangerous Goods Class 3) under AS 1940. [Refer to Australian Standard 1940, Storage and Handling of Flammable and Combustible Liquids, for full storage guidelines.]

ABBREVIATIONS:

ADB - Air-Dry Basis.

CAS# - Chemical Abstract Service number - used to uniquely identify chemical compounds.

CNS - Central Nervous System.

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.

pH - relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).

ppm - Parts Per Million.

TWA/ES - Time Weighted Average or Exposure Standard.

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:

The recommendation for protective equipment contained within this Chem Alert report 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 before final selection of personal protective equipment is made.

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 Chem Alert report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.