

Safety Data Sheet

Coolguard HD 50**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING**

Product Code 001B1643
Infosafe No. ACMZE AU/eng/C
Issued Date 16/02/2006
Product Type/Use Antifreeze and coolant.

Other Names

Name	Code
Coolguard HD 50	140001436615

Supplier
 Shell Company of Australia Ltd.
 Level 2, 8 Redfern Road,
 Hawthorn East, Victoria 3123
 (ABN 46 004 610 459)
 AUSTRALIA

Telephone Numbers
Emergency Tel.
 1800 651 818
Telephone/Fax Number
 Tel: 03 9666 5444 Fax: 03 8823 4800

2. COMPOSITION/INFORMATION ON INGREDIENTS**Preparation Description**

Mixture of monoethylene glycol and inhibitor package.

Name	CAS	EINECS	Proportion	Hazard	R Phrase
Ethenediol	107-21-1	203-473-3	40-60 %	Xn	R22
Sodium nitrite	7632-00-0	231-555-9	0.1-0.99 %	O, T, N	R8, R25, R50

Other Information

See Section 16 'Other Information' for full text of each relevant Risk Phrase.

3. HAZARDS IDENTIFICATION**Hazards Identification**

HAZARDOUS SUBSTANCE.
 NON-DANGEROUS GOODS.

Hazard classification according to the criteria of NOHSC.

Dangerous goods classification according to the Australia Dangerous Goods Code.

Human Health Hazards

Harmful if swallowed. Ingestion may cause central nervous system damage, kidney and liver failure and even death. Repeated exposure to high concentrations may cause kidney damage.

Safety Hazards

Not classified as flammable, but will burn.



Environmental Hazards

Not classified as dangerous to the environment.

4. FIRST AID MEASURES

Symptoms and Effects

Ingestion may cause dizziness, headache, nausea, vomiting and, in extreme cases, unconsciousness and even death. Symptoms of poisoning may occur even after several hours, therefore medical observation for at least 48 hours after the accident is required.

Inhalation

In the unlikely event of dizziness or nausea, remove casualty to fresh air. If symptoms persist, obtain medical attention.

Skin

Remove contaminated clothing and wash affected skin with soap and water. If persistent irritation occurs, obtain medical attention.

Eye

Flush eye with copious quantities of water. If persistent irritation occurs, obtain medical attention.

Ingestion

Wash out mouth with water and obtain medical attention. Do not induce vomiting.

Advice to Doctor

Treat symptomatically. Administer 50ml of pure ethanol in a drinkable concentration.

5. FIRE FIGHTING MEASURES

Specific Hazards

Combustion is likely to give rise to a complex mixture of airborne solid and liquid particulates and gases, including carbon monoxide and unidentified organic and inorganic compounds.

Extinguishing Media

Foam and dry chemical powder. Carbon dioxide, sand or earth may be used for small fires only.

Unsuitable Extinguishing Media

Water in jet. Use of halon extinguishers should be avoided for environmental reasons.

Protective Equipment

Proper protective equipment including breathing apparatus must be worn when approaching a fire in a confined space.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions

Avoid contact with skin and eyes. Wear PVC, Neoprene or nitrile rubber gloves. Wear rubber knee length safety boots and PVC Jacket and Trousers. Wear safety glasses or full face shield if splashes are likely to occur.

Environmental Precautions

Prevent from spreading or entering into drains, ditches or rivers by using sand, earth, or other appropriate barriers. Inform local authorities if this cannot be prevented.

Clean-up Methods - Small Spillages

Absorb liquid with sand or earth. Sweep up and remove to a suitable, clearly marked container for disposal in accordance with local regulations.



Clean-up Methods - Large Spillages

Prevent from spreading by making a barrier with sand, earth or other containment material. Reclaim liquid directly or in an absorbent. Dispose of as for small spills.

7. HANDLING AND STORAGE**Handling**

Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. Avoid prolonged or repeated contact with skin. When handling product in drums, safety footwear should be worn and proper handling equipment should be used. Prevent spillages. Cloth, paper and other materials that are used to absorb spills present a fire hazard. Avoid their accumulation by disposing of them safely and immediately. In addition to any specific recommendations given for controls of risks to health, safety and the environment, an assessment of risks must be made to help determine controls appropriate to local circumstances.

Storage

Keep in a cool, dry, well-ventilated place. Use properly labelled and closeable containers. Avoid direct sunlight, heat sources, and strong oxidizing agents.

Storage Temperatures

0°C Minimum. 50°C Maximum.

Recommended Materials

For containers or container linings, use mild steel or high density polyethylene.

Unsuitable Materials

Zinc alloys. Avoid contact with galvanized materials.

Other Information

Polyethylene containers should not be exposed to high temperatures because of possible risk of distortion.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION**Exposure Limits**

Substance	Regulations	Exposure Duration	Exposure Limit	Units	Notes
Ethanediol	NOHSC:1003	TWA	20	ppm	
	NOHSC:1003	TWA	52	mg/m3	
	NOHSC:1003	STEL	40	ppm	
	NOHSC:1003	STEL	104	mg/m3	

NOHSC:1003 Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995)] - 3rd Edition

Exposure Controls

Use local exhaust ventilation if there is a risk of inhalation of vapours, mists or aerosols.

Respiratory Protection

Care should be taken to keep exposures below applicable occupational exposure limits. If this cannot be achieved, use of a respirator fitted with an organic vapour cartridge combined with a particulate pre-filter should be considered. Not normally required. If oil mist cannot be controlled, a respirator fitted with an organic vapour cartridge combined with a particulate pre-filter should be used.

Hand Protection

PVC or nitrile rubber gloves.

Eye Protection

Wear safety glasses or full face shield if splashes are likely to occur.



Body Protection

Minimise all forms of skin contact. Launder overalls and undergarments regularly.

Environmental Exposure Controls

Minimise release to the environment. An environmental assessment must be made to ensure compliance with local environmental legislation.

9. PHYSICAL AND CHEMICAL PROPERTIES

Colour	Green.
Physical State	Liquid at ambient temperature.
Odour	Characteristic.
pH Value	10.0 - 11.0.
Boiling Point	>127°C.
Solubility in Water	Completely miscible.
Flammable Limits - Upper	15%(V/V).
Flammable Limits - Lower	3%(V/V).
Auto-Ignition Temperature	>200°C.
Other Information	Freezing Point: -37 °C.

10. STABILITY AND REACTIVITY

Stability

Stable.

Conditions to Avoid

Extremes of temperature and direct sunlight.

Materials to Avoid

Strong oxidizing agents.

Hazardous Decomposition Products

Hazardous decomposition products are not expected to form during normal storage.

11. TOXICOLOGICAL INFORMATION

Basis for Assessment

Toxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the toxicology of similar products.

Acute Toxicity - Oral

LD50 expected to be > 2000 mg/kg. Classified as harmful by EC criteria. Note: There is a marked difference in acute oral toxicity between animals and man, man being more susceptible than animals. The estimated fatal dose for man is 100 millilitres.

Acute Toxicity - Dermal

LD50 expected to be > 2000 mg/kg.

Acute Toxicity - Inhalation

Not considered to be an inhalation hazard under normal conditions of use.

Eye Irritation

Expected to be slightly irritating.

Skin Irritation

Expected to be slightly irritating.

Respiratory Irritation

If mists are inhaled, slight irritation of the respiratory tract may occur.

Skin Sensitisation

Not expected to be a skin sensitizer.

Carcinogenicity

Components are not known to be associated with carcinogenic effects.

Mutagenicity

Not considered to be a mutagenic hazard.

Reproductive Toxicity

Not considered to be toxic to reproduction.

12. ECOLOGICAL INFORMATION

Basis for Assessment

Ecotoxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the ecotoxicology of similar products.

Mobility

Liquid under most environmental conditions. Dissolves in water.

Persistence / Degradability

Major components are readily biodegradable.

Bioaccumulation

Not expected to bioaccumulate significantly.

Ecotoxicity

Product is expected to be practically non-toxic to aquatic organisms, LL/EL50 >100 mg/l. (LL/EL50 expressed as the nominal amount of product required to prepare aqueous test extract).

Other Adverse Effects

Not expected to have ozone depletion potential, photochemical ozone creation potential or global warming potential. Product is a mixture of non-volatile components, which are not expected to be released to air in any significant quantities.

13. DISPOSAL CONSIDERATIONS

Waste Disposal

Recycle or dispose of in accordance with prevailing regulations, by a recognised collector or contractor. The competence of the contractor to deal satisfactorily with this type of product should be established beforehand. Do not pollute the soil, water or environment with the waste product.

Product Disposal

As for waste disposal.

Container Disposal

Recycle or dispose of in accordance with the legislation in force with a recognised collector or contractor.

14. TRANSPORT INFORMATION

Transport Information

Not dangerous for transport under ADG, IMO and IATA/ICAO regulations.

ADG UN Class

None Allocated



ADG Packing Group

None Allocated

ADG Hazchem Code

None Allocated

IMDG Hazard Class

None Allocated

IMDG Packing Group

None Allocated

15. REGULATORY INFORMATION

EC Symbols	Xn
EC Risk Phrase	R22 Harmful if swallowed.
EC Safety Phrase	S13 Keep away from food, drink and animal feeding stuffs. S2 Keep out of reach of children. S24/25 Avoid contact with skin and eyes. S46 If swallowed, seek medical advice immediately and show this container or label.
EINECS	All components listed or polymer exempt.

AICS (Australia)

All components listed.

National Legislation

National Code of Practice for the Preparation of Material Safety Data Sheets [NOHSC:2011]

List of Designated Hazardous Substances [NOHSC:10005].

Approved Criteria for Classifying Hazardous Substances [NOHSC:1008].

Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003].

Australian Dangerous Goods Code.

Standard Uniform Scheduling of Drugs and Poisons.

Hazard Category

Harmful

Packaging & Labelling

Contains ethanediol. Contains bittering agent. Safety data sheet available for professional user on request.

16. OTHER INFORMATION**References**

67/548/EEC - Dangerous Substances Directive.

1999/45/EC - Dangerous Preparations Directive.

91/155/EEC - Safety Data Sheet Directive. For detailed advice on Personal Protective equipment, refer to the following Australian Standards :-

HB 9 (Handbook 9) Manual of industrial personal protection.

AS/NZS 1337 Eye protectors for industrial applications.

AS/NZS 1715 Selection, use and maintenance of respiratory protective devices.

AS/NZS 1716 Respiratory protective devices.

Poisons Schedule

S5.

Restrictions

This product must not be used in applications other than recommended without first seeking the advice of the SHELL technical department.

List of R Phrases in Section 2

R8 Contact with combustible material may cause fire.

R22 Harmful if swallowed.

R25 Toxic if swallowed.

R50 Very toxic to aquatic organisms.

Technical Contact Numbers

(03) 9666 5444.

Further Information

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It does not constitute a guarantee for any specific property of the product.

... **End Of SDS** ...

