



# Material Safety Data Sheet

## SHELL PROTECTACOOOL

**Infosafe™** HXPBJ      **Issue** December      **Status** ISSUED by      **BS:**  
**No.**                              **Date** 2006                              SHELLAUS                              1.9.40

**Classified as hazardous according to criteria of NOHSC**

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### 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

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**Product Name** SHELL PROTECTACOOOL  
**Product Code** 100C0368  
**Product Type** Antifreeze and coolant.  
**Company Name** SHELL COMPANY OF AUSTRALIA LTD. (ABN 46 004 610 459)  
**Address** Level 2, 8 Redfern Road Hawthorn East  
Victoria 3123  
**Emergency**  
**Tel.** 1800 651 818  
**Telephone/Fax** Tel: (03) 9666 5444  
**Number** Fax: (03) 8823 4800

<b>Other Names</b>	<b>Name</b>	<b>Product Code</b>
	Shell Protectacool	140000000289

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### 2. HAZARDS IDENTIFICATION

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**Hazard** HAZARDOUS SUBSTANCE.  
**Classification** NON-DANGEROUS GOODS.

Hazard classification according to the criteria of NOHSC.  
Dangerous goods classification according to the Australia Dangerous Goods Code.

**Risk Phrase(s)** EC Risk Phrase: R22 Harmful if swallowed.

**Safety Phrase(s)** 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.

**Human Health Effects** 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.

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

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<b>Information on Composition</b>	<b>Name</b>	<b>EINECS</b>	<b>Hazard</b>	<b>R Phrase</b>
	Ethanediol	203-473-3	Xn	R22
	Diethylene glycol	203-872-2	Xn	R22

<b>Ingredients</b>	<b>Name</b>	<b>CAS</b>	<b>Proportion</b>
	Ethanediol	107-21-1	60-100 %
	Diethylene glycol	111-46-6	0-5 %

**Preparation Description** Mixture of monoethylene glycol and inhibitor package.

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

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### 4. FIRST AID MEASURES

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

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

**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.

<b>Advice to Doctor</b>	Treat symptomatically. Administer 50ml of pure ethanol in a drinkable concentration.
<b>Symptoms and Effects</b>	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.

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## 5. FIRE FIGHTING MEASURES

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<b>Suitable Extinguishing Media</b>	Foam and dry chemical powder. Carbon dioxide, sand or earth may be used for small fires only.
<b>Special Protective Equipment for fire fighters</b>	Proper protective equipment including breathing apparatus must be worn when approaching a fire in a confined space.
<b>Specific Hazards</b>	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.
<b>Unsuitable Extinguishing Media</b>	Water in jet. Use of halon extinguishers should be avoided for environmental reasons.

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## 6. ACCIDENTAL RELEASE MEASURES

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<b>Personal Precautions</b>	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.
<b>Clean-up Methods - Small Spillages</b>	Absorb liquid with sand or earth. Sweep up and remove to a suitable, clearly marked container for disposal in accordance with local regulations.
<b>Clean-up Methods - Large Spillages</b>	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.
<b>Environmental Precautions</b>	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.

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## 7. HANDLING AND STORAGE

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**Precautions for Safe 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.

**Conditions for Safe 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

National Exposure Standards	Substance	Exposure Units	Regulations Notes	Exposure
	Ethanediol			
	NOHSC:1003	TWA	20	ppm
	NOHSC:1003	TWA	52	mg/m <sup>3</sup>
	40	ppm	NOHSC:1003	STEL
	104	mg/m <sup>3</sup>	NOHSC:1003	STEL
	Diethylene glycol			
	NOHSC:1003	TWA	23	ppm
	NOHSC:1003	TWA	100	mg/m <sup>3</sup>
	NOHSC:1003 Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995)] - 3rd Edition			

**Engineering 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.

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

**Hand Protection** PVC or nitrile rubber gloves.

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

**Other Information** Environmental Exposure Controls:  
Minimise release to the environment. An environmental assessment must be made to ensure compliance with local environmental legislation.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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**Odour** Characteristic.

**Freezing Point** Circa -37 °C.

**Boiling Point** 197°C.

**Solubility in Water** Completely miscible.

**pH Value** 7.6 to 8.5.

**Vapour Pressure** 0.05 mmHg at 20°C.

**Physical State** Liquid at ambient temperature.

**Colour** Yellow.

**Flash Point** >110°C (COC).

**Auto-Ignition Temperature** >227°C.

**Flammable Limits - Lower** 3.2% (V/V).

**Flammable Limits - Upper** 15.3% (V/V).

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## 10. STABILITY AND REACTIVITY

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**Chemical Stability** Stable.

**Conditions to** Extremes of temperature and direct sunlight.

**Avoid**

**Incompatible**

**Materials** Strong oxidizing agents, acids and alkalis.

**Hazardous**

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

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## 11. TOXICOLOGICAL INFORMATION

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**Reproductive**

**Toxicity** Not considered to be toxic to reproduction.

**Mutagenicity** Not considered to be a mutagenic hazard.

**Carcinogenicity** Components are not known to be associated with carcinogenic effects.

**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.

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## 12. ECOLOGICAL INFORMATION

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**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).

**Persistence / Degradability**

Major components are readily biodegradable.

**Mobility** Liquid under most environmental conditions. Dissolves in water.

**Bioaccumulative Potential** Not expected to bioaccumulate significantly.

**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.

**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.

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### 13. DISPOSAL CONSIDERATIONS

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**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.

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### 14. TRANSPORT INFORMATION

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**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

IATA Hazard Class: None Allocated

IATA Packing Group: None Allocated

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### 15. REGULATORY INFORMATION

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**Poisons  
Schedule** S5

**National and or  
International  
Regulatory  
Information** 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.

**Symbol** EC Symbols: Xn

**Packaging &  
Labelling** Contains ethanediol. Contains bittering agent. Safety  
data sheet available for professional user on  
request.

**Hazard Category** Harmful

**EINECS/ELINCS  
(EC)** All components listed or polymer exempt.

**AICS  
(Australia)** All components listed.

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## 16. OTHER INFORMATION

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**Contact  
Person/Point** Technical Contact Numbers:  
(03) 9666 5444.

**Literature  
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.

<b>User Codes</b>	<b><u>User Title Label</u></b>	<b><u>User Code</u></b>
	Approval Number	9590
	Part Number	12378373

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

**Revisions** 8. EXPOSURE CONTROLS, PERSONAL PROTECTION - Exposure

**Highlighted** Limits

**User Information** THE PRINTED FORM OF THIS MSDS IS CONSIDERED AN 'UNCONTROLLED' DOCUMENT ONE WEEK FROM THE PRINT DATE.

**Other Information** Infosafe No.: ACN0H AU/eng/C

Version No. 1.2

List of R Phrases in Section 2 (Composition/Information on Ingredients):

R22 Harmful if swallowed.

This MSDS has been transcribed into Infosafe NOHSC format from an original issued by the manufacturer on the date shown. Any disclaimer by the manufacturer may not be included in the transcription.

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End of MSDS

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Print Date: 13/04/2010

BS: 1.9.40