SAFETY DATA SHEET

1 . Identification of the substance/preparation and of the company/undertaking

Product name	Castrol Antifreeze
SDS #	450319
Product Use	Automotive coolant system (antifreeze/anticorrosion) concentrate. For specific application advice see appropriate Technical Data Sheet or consult your Castrol representative.
Supplier	Castrol (UK) Ltd Wakefield House Pipers Way Swindon Wiltshire SN3 1RE
EMERGENCY TELEPHONE NUMBER	+44 (0) 1793 512712

2 . Composition/information on ingredients

Ethylene glycol. Corrosion inhibitor.

Chemical name	CAS no.	%	EINECS / ELINCS.	Classification
Ethanediol	107-21-1	95-100	203-473-3	Xn; R22

See Section 16 for the full text of the R Phrases declared above

Occupational Exposure Limit(s), if available, are listed in Section 8

3 . Hazards identification

This preparation is classified as dangerous according to Directive 1999/45/EC as amended and adapted.

Physical/chemical Hazards	Not classified as dangerous.
Human health hazards	Harmful if swallowed.
Environmental hazards	Unlikely to be harmful to aquatic organisms.
Effects and symptoms	
Eyes	No significant health hazards identified.
Skin	No significant health hazards identified.
Inhalation	No significant health hazards identified.
Ingestion	Harmful if swallowed.

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4 . First aid measures

Eye Contact	In case of contact, immediately flush eyes with a copious amount of water for at least 15 minutes. Get medical attention if irritation occurs.
Skin contact	In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if irritation develops.
Inhalation	If inhaled, remove to fresh air. Get medical attention if symptoms appear.
Ingestion	Get medical attention urgently informing the doctor that a product containing ethylene glycol has been ingested and specific treatment may be required (see Advice to physicians). If hospital facilites or medical assistance are NOT immediately available: If contamination of the mouth occurs, wash out thoroughly with water. If larger amounts are swallowed and hospital facilities or medical assistance are not immediately available, induce vomiting if the casualty is fully conscious. Never attempt to induce vomiting in an unconscious or semi-conscious patient. Transport casualty together with the product container, its label or the safety data sheet urgently to hospital. Inform the doctor that a product containing ethylene glycol has been ingested.
Notes to physician	Gastric lavage is indicated if significant quantities have been ingested in the previous 4 hours. The metabolism of the glycol to oxalic acid may be delayed by the intravenous administration of ethanol (give as a 5% solution in physiological saline to maintain a blood level of 1-2mg/ml). This has been shown to be an effective antidote provided treatment is started within about 6 hours of exposure. The glycol may be removed by dialysis but oxalates are not readily removed.

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5 . Fire-fighting measures

Extinguishing Media	
Suitable	In case of fire, use water fog, foam, dry chemical or CO2 extinguisher or spray.
Not Suitable	Do not use water jet.
Unusual fire/explosion Hazards	This material is not explosive as defined by established regulatory criteria.
Special fire-fighting procedures	None identified.
Protection of fire-fighters	Fire-fighters should wear self-contained positive pressure breathing apparatus (SCBA) and full turnout gear.

6 . Accidental release measures

Personal Precautions	Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment (Section 8). Follow all fire fighting procedures (Section 5).
Environmental precautions and cleanup methods	If emergency personnel are unavailable, contain spilled material. For small spills add absorbent (soil may be used in the absence of other suitable materials) scoop up material and place in a sealed, liquid-proof container for disposal. For large spills dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal. Minimize contact of spilled material with soils to prevent runoff to surface waterways. See Section 13 for Waste Disposal Information.
Personal Protection in Case of a Large Spill	Splash goggles. Full suit. Boots. Gloves.

7 . Handling and storage

Handling	Wash thoroughly after handling. Avoid contact with eyes, skin and clothing.
Storage	Keep out of the reach of children. Store in original container; DO NOT DECANT. Do not remove warning labels from containers. Store in a cool, well-ventilated area away from incompatible materials and ignition sources.

8 . Exposure controls/personal protection

Ingredient Name	**Occupational Exposure Limits**
Ethanediol	**EH40-OES (United Kingdom (UK), 2002). Skin** STEL: 104 mg/m³ 15 minute(s). Form: Vapour TWA: 10 mg/m³ 8 hour(s). Form: Particulate TWA: 52 mg/m³ 8 hour(s). Form: Vapour

Control Measures	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapours below their respective occupational exposure limits. Ensure that eyewash stations and safety showers are close to the workstation location.
Hygiene measures	Wash hands after handling compounds and before eating, smoking, using lavatory, and at the end of day.
Personal protective equipment	
Respiratory system	None required; however, use of adequate ventilation is good industrial practice.
Skin and body	None required; however, use of protective clothing is good industrial practice.
Hands	None required; however, use of gloves is good industrial practice.
Eyes	Safety glasses with side shields.

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9 . Physical and chemical properties

Flash point	>100 °C (Closed cup)
Colour	Blue.
Odour	Mild
Odour threshold	Not available.
Physical state	Liquid.
Boiling Point / range	>100 °C
Density	>1 g/cm³ at 20 °C
Solubility	Easily soluble in cold water.

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10 . Stability and reactivity

Incompatibility with Various Substances	The product is stable. Hazardous reactions are possible with concentrated mineral acids, strong oxidizing agents, alkali metals and isocyanates. Combustible material.
Hazardous Polymerization	Will not occur.

11 . Toxicological information

Acute toxicity	Unlikely to cause more than transient stinging or redness if accidental eye contact occurs. Unlikely to cause harm to the skin on brief or occasional contact but prolonged or repeated exposure may lead to dermatitis. Harmful if swallowed. At normal ambient temperatures this product will be unlikely to present an inhalation hazard because of its low volatility. May be harmful by inhalation if exposure to vapour, mists or fumes resulting from thermal decomposition products occurs.
Chronic toxicity	
Carcinogenic effects	No component of this product at levels greater than 0.1% is identified as a carcinogen by ACGIH, the International Agency for Research on Cancer (IARC) or the European Commission (EC).

12 . Ecological information

Persistence/degradability	Inherently biodegradable
Mobility	Spillages may penetrate the soil causing ground water contamination.
Bioaccumulative potential	This product is not expected to bioaccumulate through food chains in the environment.
Environmental hazards	Unlikely to be harmful to aquatic organisms.
Other Ecological Information	Miscible in water.

13 . Disposal considerations

Disposal Consideration / Waste information	Undiluted fluid Where possible, arrange for product to be recycled.Dispose of via an authorised person/ licensed waste disposal contractor in accordance with local regulations.Incineration may be carried out under controlled conditions provided that local regulations for emissions are met. Diluted Fluid Diluted fluid should not be discharged into sewage systems unless provided for by local regulations. Dispose under conditions approved by the local authority or via a licensed waste disposal contractor.
Hazardous Waste	The classification of the product may meet the criteria for a hazardous waste

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14 . Transport information

Not classified as hazardous for transport (ADR, RID, UN , IMO, IATA/ICAO).

15 . Regulatory information

Label Requirements

Hazard symbol(s)

Harmful

Indication of Danger		
Risk Phrases	R22- Harmful if swallowed.	
Safety Phrases		
Contains	Ethanediol	203-473-3
Restrictions to product use	Classification and labelling have been performed according to EU directives 1999/45/EC and 67/548/EEC as amended and adapted. - Industrial applications.	
EU Regulations	Classification and labelling have been performed according to EU directives 1999/45/EC and 67/548/EEC as amended and adapted.	

Other Regulations

Inventories

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AUSTRALIAN INVENTORY (AICS): In compliance.

CANADA INVENTORY (DSL): In compliance.

CHINA INVENTORY (IECS): In compliance.

EC INVENTORY (EINECS/ELINCS): In compliance.

JAPAN INVENTORY (ENCS): In compliance.

KOREA INVENTORY (ECL): In compliance.

PHILIPPINE INVENTORY (PICCS): In compliance.

US INVENTORY (TSCA): Listed on inventory.

16 . Other information

Full text of R-phrases appearing in section 2 : R22- Harmful if swallowed.

HISTORY

Date of issue 24/10/2003.

Date of previous issue No Previous Validation.

Prepared by Product Stewardship Group

Notice to Reader

The data and advice given apply when the product is sold for the stated application or applications. The product is not sold as suitable for any other application. Use of the product for applications other than as stated in this sheet may give rise to risks not mentioned in this sheet. You should not use the product other than for the stated application or applications without seeking advice from us.

If you have purchased the product for supply to a third party for use at work, it is your duty to take all necessary steps to secure that any person handling or using the product is provided with the information in this sheet.

If you are an employer, it is your duty to tell your employees and others who may be affected of any hazards described in this sheet and of any precautions which should be taken.

Further copies of this Safety Data Sheet may be obtained from Castrol International.

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