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Product code: **Edition:** 2 **Date:** 03/02/2005

1. Identification of the substance/preparation and company

Product name: PAR COOL EG
 Product type: Antifreeze
 Supplier: Atlas Copco Airpower N.V. – Portable Air Division
 Address: Ingberthoeveweg 7, 2630 Aartselaar – BELGIUM
 Product safety guide: coolants
 Emergency contact: **Please contact the nearest Atlas Copco Customer Centre or for urgent matters the Medical Service of Atlas Copco Airpower in Belgium (+32 3 870 21 05)**

2. Composition and information on ingredients

Name	% Wt	CAS No.	EC No.
Ethylene glycol Xn R 22 Harmful if swallowed.	45 - 54,99	107-21-1	203-473-3
Sodium 2-ethylhexanoate Xn R 63 Possible risk of harm to the unborn child.	< 5	19766-89-3	243-283-8

3. Hazards Identification

Product classification Harmful

Acute effects of exposure to man

Inhalation Vapours or mist, in excess of permissible concentrations, or in unusually high concentrations generated from spraying, heating the material or from exposure in poorly ventilated areas or confined spaces, may cause irritation of the nose and the throat, headache, nausea, and drowsiness.

Skin contact Brief contact may cause slight irritation.
Prolonged contact, as with clothing wetted with material, may cause more severe irritation and discomfort, seen as local redness and swelling.

Eye contact May cause irritation, experienced as mild discomfort and seen as slight excess redness of the eye.

Ingestion Ethylene glycol and diethylene glycol are toxic when swallowed. A lethal dose for an adult is 1-2 ml per kilogram, or about 100 ml. Symptoms include staggering, slurred speech, loss of coordination, confusion, faintness, nausea, vomiting, increased heart rate, difficulty breathing, difficulty seeing, convulsions, and collapse. Symptoms may be delayed. Decreased urine output, kidney failure, and nervous system damage may also occur. Aspiration may occur during swallowing or vomiting, resulting in lung damage.

Chronic effects of exposure to man

Medical conditions aggravated by exposure Repeated ingestion may cause kidney damage.
Repeated overexposure may aggravate an existing kidney disease.
Because of its irritating properties, repeated skin contact may aggravate an existing dermatitis (skin condition).

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4. First Aid Measures

Route of exposure

Inhalation	If irritation, headache, nausea, or drowsiness occurs, remove to fresh air. Get medical attention if breathing becomes difficult or symptoms persist.
Skin contact	Wash skin with plenty of soap and water for several minutes. Get medical attention if skin irritation develops or persists.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Hold eyelids apart while flushing to rinse entire surface of eye and lids with water. Get medical attention.
Ingestion	Get immediate medical attention. If patient is conscious and can swallow, give two glasses of water (500ml) but do not induce vomiting. If vomiting occurs, give fluids again. Have physician determine if condition of person will permit induction of vomiting or evacuation of stomach. Do not give anything by mouth to an unconscious or convulsing person.
Other recommendations	Ethylene glycol poisoning may initially produce behaviour changes, drowsiness, vomiting, diarrhoea, thirst and convulsions. Renal damage or failures with metabolic acidosis are late signs of poisoning. Immediate treatment may reduce toxic effects. Supplemented, if necessary with haemodialysis. Intravenous ethanol in sodium bicarbonate solution is a recognized antidote. Contact a poison centre for further treatment information.

5. Fire Fighting Measures

Suitable extinguishing media	Use water fog, dry powder, foam, or carbon dioxide. Water or foam may cause frothing. Use water to cool fire-exposed containers. If a leak or spill has not ignited, use water fog to disperse the vapours and to provide protection for persons attempting to stop the leak.
Extinguishing media which must not be used for safety reasons	Water jet.
Special exposure hazards arising from the substance or preparation itself, combusting products, resulting gases.	None
Special protective equipment for fire-fighters	The nature of special protective equipment required will depend upon the size of the fire, the degree of confinement of the fire and the natural ventilation available. Fire-resistant clothing and self-contained breathing apparatus is recommended for fires in confined spaces and poorly ventilated areas. Full fireproof clothing is recommended for any large fires involving this product.

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6. Accidental Release Measures

Procedures in case of accidental release or Leakage

Ventilate area; Avoid breathing vapour. Use self-contained breathing apparatus or supplied air mask for large spills or confined areas. Contain spill if possible. Wipe up or absorb on suitable material and shovel up. Prevent entry into sewers and waterways. Avoid contact with skin, eyes or clothing.

7. Handling and storage

Handling

Periods of exposure to high temperatures should be minimized. Water contamination should be avoided.

Storage

Transport, handle and store in accordance with applicable local regulations and only in labelled containers designed for this product.

8. Exposure Controls/Personal Protection

Respiratory protection

Airborne concentrations should be kept to lowest levels possible. If vapour, mist or dust is generated, 3M mask type 7002 fitted with cartridges for organic vapours e.g. type 3M/6057. E.g. Dräger panorama Nova respirator mask + respirator type PA 94 should be used for cleaning large spills or upon entry into tanks, vessels, or other confined spaces. See below for applicable permissible concentrations.

Hand and skin protection

Avoid skin contact. Nitrile/neoprene gloves recommended. When contamination has occurred, wash exposed skin with soap and water.

Eye protection

Chemical type goggles or face shield recommended to prevent eye contact.

Exposure limit for the product

Ethylene glycol : TWA/OEL (8hr) : 52 mg/m³ ; STEL : 104 mg/m³ ; ACGIH : STEL = 100 mg/m³

9. Physical and Chemical Properties

Appearance	Red liquid
Odour	Mild odour
Relative density	1.0707 kg/l @ 15 °C
Viscosity	Not determined
pH	8.6
Solubility in water	100 %

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10. Stability/reactivity

Conditions to avoid	Sources of ignition such as naked flames, sparks, hot surfaces.
Materials to avoid	Avoid contact with strong oxidising agents.
Hazardous decomposition products	Oxides of carbon, aldehydes and ketones.

11. Toxicological information

Acute

Inhalation	High concentrations of vapours or mist are likely to be irritating to the respiratory tract and may cause nausea, dizziness, headaches and drowsiness.
Skin contact	Slightly irritating to the skin.
Eye contact	Unlikely to cause more than transient stinging or redness if accidental eye contact occurs.
Ingestion	Harmful. Causes headache, weakness, confusion, loss of coordination, dizziness, difficulty walking, nausea, vomiting, decreased blood pressure, increased heart rate, pulmonary oedema, kidney failure, unconsciousness, convulsions, and coma. Symptoms may be delayed. Severe poisoning may cause death.
<u>Chronic</u>	Repeated ingestion may cause kidney damage. Repeated overexposure may aggravate an existing kidney disease.

12. Ecological information

Mobility	Not determined.
Persistence and degradability	According to EC criteria: expected to be readily biodegradable.
Potential to bioaccumulation	This product is estimated to have a low potential to bioconcentrate.
Aquatic toxicity Remarks	Releases of small quantities are unlikely to affect adversely the functioning of water treatment plants. WGK=1

13. Disposal Considerations

Disposal	Dispose in accordance with local laws and regulations governing disposal of chemicals. EWC-Nr. : 16 01 14
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14. Transport Information	Not regulated.
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15. Regulatory Information

Classification/Labelling information	Under the criteria of Directive EEC/67/548 (dangerous substances) and EEC/1999/45 (dangerous preparations) :
Symbol (letter notation) + Indication of danger	Xn HARMFUL
Risk phrases	Xn R 22 Harmful if swallowed.
Safety phrases for public use	S 2 Keep out of the reach of children. S 46 If swallowed, seek medical advice immediately and show this container or label.
Safety phrases for industrial use	S 36/37 Wear suitable protective clothing and gloves.
Hazardous ingredients	Ethylene glycol
Additional information	Refer to any national measures that may be relevant.

16. Other Information

Acute or chronic oral consumption of products containing ethylene glycol can produce significant adverse health effects, including death, in humans and animals. Keep out of reach of children. Such products should not be used in potable (drinking) water systems or other systems where contamination of potable water supplies is possible (e.g., recreational vehicles, winterising potable water systems). Do not decant into unlabeled containers.

MSDS history:	Edition number 02 First issued: 08/07/2002
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All information contained in this Material Safety Data Sheet and in particular, the health and safety and environmental information is accurate to the best of our knowledge and belief as at the date of issue specified. However, the Company makes no warranty or representation, express or implied, as to the accuracy or completeness of such information.

The provision of this Material Safety Data Sheet is not intended, of itself, to obviate the need for all users to satisfy themselves that the product described is suitable for their individual purposes and that the safety precautions and environmental advice are adequate for their individual purposes and situation. Further, it is the user's obligation to use this product safely and to comply with all applicable laws and regulations concerning the use of the product.

The company accepts no responsibility for any injury, loss or damage, consequent upon any failure to follow the safety and other recommendations contained in this Material Safety Data Sheet, nor from any hazards inherent in the nature of the material, nor from any abnormal use of the material.

Data sheet prepared by Atlas Copco Airpower N.V. – Portable Air Division
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