



MATERIAL SAFETY DATA SHEET

1 . Chemical & Company Identification

Trade name :	KZN ENGINE COOLANT / ANTIFREEZE
Supplier :	KZN Oils 45 North Coast Road, Durban, South Africa
Routine inquiries :	+27 31 570 0550
Fax :	+27 31 570 0522
Email :	info@kznoils.co.za
Chemical Description :	Coolant / Antifreeze

2. Composition / Information on Ingredients

CAS number:		107-21-1 (mono ethylene glycol)		
Preparation description:		It may also contain one or more of the following additives: anti-oxidants, corrosion inhibitors , metal deactivators, carburettor anti-icing compounds, dyes, markers, proprietary performance improving packages		
Component name	CAS number	Content range	EC hazard	R phases
Mono Ethylene Glycol	107 – 21 -1	>60 %	Xn	R 22
Other information		Contains Bitrex which has an extremely bitter taste		

3. Hazards Identification

Human health hazards:	Harmful is swallowed. Possible risk of harm to the unborn child
Safety hazards:	Not classified as flammable but will burn
Environmental hazards:	Not classified as dangerous under EC criteria. Poses a significant risk of oxygen depletion in aquatic systems

4. First Aid Measures

Symptoms and effects:	In the initial stages central nervous system effects characterized by drunkenness. Eye contact may cause pain response. Contains Bitrex which has an extremely bitter taste
Skin:	Wash skin with water using soap if available. If persistent irritation occurs, obtain medical attention
Eye:	Flush eye with water. If persistent irritation occurs, obtain medical attention
Ingestion:	DO NOT DELAY. Do not induce vomiting. Give water to drink, providing patient is conscious. OBTAIN MEDICAL ATTENTION IMMEDIATELY.
Inhalation:	Remove to fresh air. If rapid recovery does not occur, obtain medical attention
Advice to doctor:	Treat symptomatically. The essentials of therapy are: <ol style="list-style-type: none"> 1. Supportive treatment of respiratory distress and shock 2. Correction of metabolic acidosis and hypocalcaemia 3. Rapid and sustained diuresis, when possible with the use of hypertonic mannitol 4. Immediate peritoneal of haemodialysis 5. Thiamine and pyridoxine supplements 6. Intravenous administration of ethanol if the diagnosis is recognised within 6 hours after ingestion and 7. Treatment of renal failure with dialysis is needed to keep patient free from signs and symptoms of uraemia



5. Fire Fighting Measures

Specific hazards:	Hazardous combustion products may include: Carbon monoxide
Extinguishing media:	Alcohol-resistant foam. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
Specific methods:	Do not use water in a jet
Protective equipment:	Full protective clothing and self-contained breathing apparatus
Other information:	Keep adjacent containers cool by spraying with water

6. Accidental Release Measures

Personal precautions:	Avoid contact with skin, eyes and clothing. Do not breathe mists or aerosols
Personal protection :	If risk of inhalation of aerosol/mists/spray, wear half mask respirator with organic vapors cartridge and built-in particle filter NPF 20 (gas only). Monogoggles PVC glove gauntlet type
Environmental precautions :	Prevent contamination of soil and water. Inform local authorities if this cannot be prevented
Clean-up methods – small spillage:	Absorb or contain liquid with sand, earth or spill control material. Shovel up and place in a labeled, sealable container for subsequent safe disposal. Flush contaminated area with plenty water
Clean-up methods – large spillage	Prevent from spreading by making a barrier with sand, earth or other containment material. Transfer to a labeled, sealed container for product recovery or safe disposal. Otherwise treat as for small spillage

7. Handling & Storage

Handling:	Do not breathe mists, fumes or vapors from heated product. Avoid prolonged or repeated contact with : skin, eyes and clothing
Handling Temperatures:	60 ° C maximum
Storage:	Keep container tightly closed
Storage Temperatures:	Ambient
Recommended Materials:	For container or container fillings, use carbon steel or stainless steel.



8. Exposure Control / Personal Protection

Engineering control measures:		Use only in well ventilated areas		
Occupational exposure standards:		Threshold limit values are given below. Lower exposure limits may apply locally.		
Component name	Limit type	Value	Unit	Other information
Mono Ethylene Glycol	TLV	60	Mg/m ³	ACGIH: Vapour
Mono Ethylene Glycol	STEL	125	Mg/m ³	ACGIH: Vapour
Mono Ethylene Glycol	TLV	10	Mg/m ³	ACGIH: Particulate
Hygiene measures:		Launder overalls and undergarment regularly. Dispose of solid gloves. Wash hands before eating and drinking		
Respiratory protection:		Not normally required		
Hand protection:		PVC, neoprene, or nitrile rubber gloves		
Eye protection:		monogoggles		
Body protection:		Standard issue work clothes. Safety shoes or boots – chemical resistant.		

9. Physical & Chemical Properties

Physical state:	Liquid at ambient temperature
Colour:	Yellow
Odour:	Characteristic
pH:	7.0 – 9.0 (50% solution in water)
Boiling point	> 103°C
Density:	1.045 to 1.075 kg/m at 20°C
Solubility in water:	Completely miscible

10. Stability & Reactivity

Stability :	Stable under normal use conditions. Reacts with strong oxidizing
Conditions to avoid:	None known
Materials to avoid:	Oxidizing agents. Strong acids
Hazardous decomposition products:	None expected under normal conditions



11. Toxicological Information

Basis for assessment :	Information given is based on product data and on data on the components and the components and the toxicology of similar products.
Acute toxicity – oral:	LD50 > 2000 mg/kg Note: There is a marked difference in acute oral toxicity between animals and man, man being more susceptible than animals. The estimate fatal dose for man is 100 milliliters
Acute toxicity – inhalation:	Data not available
Eye irritation	Not irritating
Skin irritation	Not irritating
Respiratory irritation:	Data not available from animal studies
Skin sensation:	Not a skin sensitiser
(sub) chronic toxicity	Repeated exposure causes kidney damage
Mutagenicity:	
Reproductive toxicity	Causes slight foetotoxicity
Human effects:	There is a marked difference in acute oral toxicity between animals and man, man being more susceptible than animals. The estimate mean fatal dose is 100 mg/kg. renal damage has been observed in man

12. Ecological Information

Basis for assessment	Information given is based on a knowledge of the constituents and the ecotoxicology of a similar substance
Mobility:	Dissolves in water. If product enters soil. It will be mobile and may contaminate groundwater
Persistence / degradability	Readily biodegradable significantly.
Bioaccumulation	Does not bioaccumulate significantly.
Acute toxicity - fish	Practically non-toxic, LC50> 100mg/l (estimated)
Acute toxicity - daphnia	Practically non-toxic, LC50> 100mg/l (estimated)
Acute toxicity - algae	Practically non-toxic, LC50> 100mg/l (estimated)
Acute toxicity - bacteria	Practically non-toxic, LC50> 100mg/l (estimated)
Sewage treatment:	Practically non-toxic, EC 50> 100mg/l to organisms in sewage treatment plants (estimated)

13. Disposal Considerations

Precautions:	Refer to section 7 before handling the product or containers
Water disposal:	Recover or recycle if possible, otherwise: incineration with residence time of 2 sec above 1200°C, wet scrubbing facilities and flue gas
Product disposal	Recycle or dispose of in accordance with prevailing regulations, preferably to a recognised collector or contractor.
Container disposal	Drain container thoroughly. Rinse three times with water. Send to drum recovered or metal declaimer

14. Transport Information

Not dangerous for conveyance under UN, IMO, ADR/ Rid and IATA/
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15. Regulatory Information

EC label name	Contains monoethylene glycol
EC Classification	Harmful
EC symbols	Xn
EC Risks phrases	R22 harmful if swallowed
EC Safety phrases	S2 keep out of reach of children. S24/25 avoid contact with skin and eyes.
EINECS (EC):	All components listed
EC Annex I Number:	603-027-00-1 (MEG)
TSCA (USA)	All components listed
Other information	For listing on other inventories, e.g. MITI.(Japan), AICS(Australia) and DSL(Canada), please consult suppliers

16. Other Information

Uses and restrictions:	Use only as ready-to-use coolant
Technical contact point:	For further information, contact your local KZN , Company or agent
Core SDS history:	Edition :01 First Issue : 01 June 1999 Revised : (First Issue) Supplier Reference : 0
SDS distribution:	This document contains important information to ensure the safe storage, handling and use of this product. The information in this document should be brought to the attention of the person in your organization responsible for advising on safety matters. Recipients of our product must take responsibility for observing existing laws and regulations

DISCLAIMER: *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 should not therefore be constructed as guaranteeing any specific property product.*

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