

# FIRE SERVICES & SUPPLIES



44 Culm Lea Cullompton Devon EX15 1NJ

Mobile: 07545 097968 Website: <http://www.Fire-Services.co.uk> Email: info@Fire-Services.co.uk

Company Registration No: 6808735

PRODUCT SAFETY DATA SHEET: Ethylene Glycol			
ISSUE NO:	1		
AUTHORISED:			
DATE:	November 1998		
<b>1) IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY UNDERTAKING</b>			
Product Name:	Ethylene Glycol		
Application:	Antifreeze' for water based fire extinguishers		
<b>2) COMPOSITION/INFORMATION ON THE INGREDIENTS</b>			
Ingredients	CAS Number	%	EINECS Number
C <sub>2</sub> H <sub>6</sub> O <sub>2</sub> Ethylene Glycol	107/21/1	* 8 - 11	203-473-3
<b>3) HAZARDS IDENTIFICATION</b>			
Important Hazards			
No known acute health Slightly irritant to the eyes and to the respiratory organs. On continuous/repeated exposure/contact: slightly irritant to the skin. Narcotic in high concentrations. Harmful by ingestion			
<b>4) FIRST AID MEASURES</b>			
4.1) Contact with the eyes	Consult a doctor/medical service. Rinse immediately with plenty of water for 15 minutes. Do not apply neutralising agents.		
4.2) Contact with the skin	Wash immediately with lots of water/soap (15 minutes). Remove clothing before washing. Consult a doctor/medical service if irritation persists.		
4.3) Inhalation	Remove the victim into fresh air. Unconscious: maintain adequate airway and respiration. Consult a doctor/medical service if breathing problems develop		
4.4) Ingestion	Consult a doctor/medical service. Rinse mouth with water - do not allow vomiting. Immediately give lots of water to drink. Never give water to an unconscious person		
<b>5) FIRE FIGHTING MEASURES</b>			
Extinguishing Media			
Suitable	Water Spray, polyvalent foam, alcohol foam, BC Powder, Carbon Dioxide		
Unsuitable Extinguishing Media	Container may slop over if solid jet is applied		
Instructions			
Cool tanks/drums and remove them to safety. Take account of toxic fire fighting water. Limit and if possible collect/contain the fire fighting water			
Protective Equipment for Fire Fighting Head/Fire Exposure	Compressed air/oxygen apparatus		
Large Spills in Enclosed Spaces	Compressed air apparatus		
<b>6) ACCIDENTAL RELEASE MEASURES</b>			
Personal precautions	Safety goggles, neoprene-nitrile rubber		



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	gloves, protective clothing.
Environmental precautions	Collect/pump leaking substance into a suitable container. Plug the leak, cut off the supply. Dam up the liquid spill. Do not discharge into the sewer
Spillages	Liquid Spill: absorb into non-combustible absorbent, sand, earth, vermiculite or powdered limestone. Scoop the absorbed substance into sealable containers. Carefully collect the spill/residue. Clean with an excess of water. Wash clothing and equipment after handling.
<b>7) HANDLING AND STORAGE</b>	
Handling	Reduce/avoid exposure and/or contact. Keep container tightly closed. Provide appliances with earthing. Do not discharge into the sewer
Storage	Protect from frost. Store out of direct sunlight. Store between 1° - 48° C
<b>8) EXPOSURE CONTROLS AND PERSONAL PROTECTION</b>	
Occupational Exposure Limits	TLV value: 127mg/m3 - 50 ppm (ceiling value) (TLV A4: not classifiable as a human carcinogen)
Eye Protection:	Safety goggles
Skin Protection	Gloves - neoprene-nitrile rubber, protective clothing
Respiratory Protection	high vapour concentrations: gas mask with filter AX
Engineering Control Measures	Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation
<b>9) PHYSICAL AND CHEMICAL PROPERTIES</b>	
Physical State (at 20°C)	Liquid
Odour	Odourless
Colour	Colourless
pH	5.5/7.5 (50% solution)
Boiling point/range (°C)	197°C
Melting Range/Point	-13°C
Flash Point	111°C
Auto Ignition Point	3/15% vol
Explosion Limits (%)	1050 ± 10
Vapour Pressure (at 20°C)	0.08hPa
Relative Density (at °C)	1.113
Water Solubility	Unlimited
Soluble In	Ethanol, acetone, acetic acid, glycerol
Relative Vapour Density	2.1
Saturation Concentration	0.3 g/m3
Viscosity	21 mPa.s
<b>10) STABILITY AND REACTIVITY</b>	
Stability: Hygrscopic	On burning: release of harmful/irritant gases/vapours (CO - CO2). Reacts violently with (strong) oxidisers, increased



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	<p>risk of fire. Violent to explosive reaction with some acids. Reacts on exposure to temperature rise with some bases</p>
Reactivity	<p>On burning: release of harmful/irritant gases/vapours (CO - CO<sub>2</sub>). Reacts violently with (strong) oxidisers, increased risk of fire Violent to explosive reaction with some acids. Reacts on exposure to temperature rise with some bases</p>
<b>11) TOXICOLOGICAL INFORMATION</b>	
Acute Toxicity	<p>LD50 oral rat: 5840 mg/kg. LD50 dermal rabbit: 9530 mg/kg. LC50 inhalation rat: - no data IARC classification: N. A.</p>
Routes of exposure	<p>Routes of exposure: Swallowed and skin contact</p>
Acute effect/symptoms	<p>Slightly irritant to the respiratory tract and to the eye tissue. Slightly irritant to the nasal mucous membranes. Headache, dizziness, mental confusion. Vomiting, nausea, diarrhoea Gastrointestinal complaints CNS depression</p>
Chronic Effect:	<p>Skin rash/inflammation Enlargement/affection of the liver and the renal tissue Change in the haemogramme/blood composition</p>
<b>12) ECOLOGICAL INFORMATION</b>	
Biodegradation Soil	<p>T<sub>1/2</sub>: days BOD<sub>20</sub>: 0.47g O<sub>2</sub>/g substances COD: 1.24g O<sub>2</sub>/g substances</p>
Biodegradation Water	<p>Readily degradable in water Test: MITI 83/96% 14 days</p>
Bio-accumulation	<p>log Pow: 1.34/-1.93 - BCF: 10 (72h) Leuciscus Idus</p>
Aquatic Toxicity:	<p>LC<sub>50</sub> (96h): 53000 mg/l (Pimephales Promelas) EC<sub>50</sub> (24h): &gt;10000 mg/l (Daphnia Magna) EC<sub>50</sub>: 180000 mg/l (Chlorella Sp)</p>
Other Information	<p>WGK: 0 - Effect on the ozone layer:- Waste water purification: Harmless to activated sludge</p>
<b>13) DISPOSAL CONSIDERATIONS</b>	
Disposal of product	Recycle by distillation



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	Do not discharge into surface water Remove to an incinerator equipped with an afterburner and a flue gas scrubber
<b>14) TRANSPORT INFORMATION</b>	
UN No	N/A
ADR/RID Substance Identification No	N/A
IMDG - Class	N/A
<b>15) REGULATORY INFORMATION</b>	
EU labelling information	Labelling according to EC directives 67/548/EEC and 88/379/EEC
Harmful	R22 - Harmful if swallowed S02 - Keep out of reach of children
<b>16) OTHER INFORMATION</b>	
<p>This Safety Data Sheet provides Health and Safety information. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information.</p> <p>The product information on this sheet is, to the best of this Company's knowledge, correct as at the date of publication. The user must be satisfied that the product is entirely suitable for the purpose for which it is being used.</p> <p>The Company accepts no liability for any loss or damage (other than that arising from death or personal injury caused by negligence if proved) resulting from reliance on this information).</p>	