MATERIAL SAFETY DATA SHEET

Ethylene glycol

Section 1 - Chemical Product and Company Identification

MSDS Name:	Ethylene glycol
Synonyms:	1,2-Ethanediol; Monoethylene glycol

Company Identification: (INDIA)	DS Global Venture, [Registered office address], INDIA
For information in the INDIA, call:	Tel: +91 98933 53200 Email: [Email address]

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name:	%	EINECS#
107-21-1	Ethylene glycol	99%	203-473-3

Hazard Symbols:	XN
	
Risk Phrases:	22

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Harmful if swallowed.

Potential Health Effects

Eye:	May cause moderate eye irritation. Causes redness and pain.
Skin:	May cause skin irritation. May be harmful if absorbed through the skin. May cause reddening of the skin.
Ingestion:	May cause kidney damage. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure. May cause nausea and vomiting.
Inhalation:	May cause respiratory tract irritation. If ethylene glycol is heated or misted in work areas that are poorly ventilated, vapor/mist may accumulate and cause respiratory irritation and symptoms such as headache and nausea.
Chronic:	May cause liver and kidney damage.

Section 4 - First Aid Measures

Eyes:	Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.
Skin:	Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.
Ingestion:	Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical aid. Wash mouth out with water.
Inhalation:	Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.
Notes to	Treat symptomatically and supportively. Administration of Sodium bicarbonate may be of

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Physician:	value to treat acidosis.

Section 5 - Fire Fighting Measures

General Information:	As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.
Extinguishing Media:	Water or foam may cause frothing. Use water spray to cool fire-exposed containers. Cool containers with flooding quantities of water until well after fire is out. Use water spray, dry chemical, carbon dioxide, or alcohol-resistant foam.

Section 6 - Accidental Release Measures

General Information:	Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks:	Avoid runoff into storm sewers and ditches which lead to waterways. Absorb spill using an absorbent, non-combustible material such as earth, sand, or vermiculite. Do not use combustible materials such as sawdust. Isolate area and deny entry. Provide ventilation.

Section 7 - Handling and Storage

Handling:	Use with adequate ventilation. Avoid breathing dust, vapor, mist, or gas. Avoid contact with skin and eyes. Pregnant workers should keep exposure to a minimum.
Storage:	Keep away from sources of ignition. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:	
	Use adequate ventilation to keep airborne concentrations low.
Exposure Limits	CAS# 107-21-1:
	United Kingdom, WEL - TWA: 20 ppm TWA (vapor); 52 mg/m3 TWA (vapor); 10 mg/m3 TWA (particulate) United Kingdom, WEL - STEL: 40 ppm STEL (vapor); 104 mg/m3 STEL (vapor); 30 mg/m3 STEL (particulate)
	Belgium - TWA: 20 ppm VLE; 52 mg/m3 VLE Belgium - STEL: 40 ppm VLE; 104 mg/m3 VLE
	France - VME: 20 ppm VME; 52 mg/m3 VME France - VLE: 40 ppm VLE (vapor); 104 mg/m3 VLE (vapor)
	Germany: 10 ppm TWA; 26 mg/m3 TWA Germany: skin notation
	Malaysia: 39.4 ppm Ceiling (aerosol); 100 mg/m3 Ceiling (aerosol)
	Netherlands: 40 ppm STEL; 104 mg/m3 STEL Netherlands: 20 ppm MAC (fume); 52 mg/m3 MAC (fume); 10 mg/m3 MAC (droplets)
	Russia: 5 mg/m3 TWA (aerosol)
	Spain: 20 ppm VLA-ED; 52 mg/m3 VLA-ED Spain: 40 ppm VLA-EC; 104 mg/m3 VLA-EC

Personal Protective Equipment	
Eyes:	Wear chemical splash goggles.
Skin:	Wear appropriate protective gloves to prevent skin exposure.
Clothing:	Wear appropriate protective clothing to prevent skin exposure.
Respirators:	Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

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Section 9 - Physical and Chemical Properties

Physical State:	Viscous liquid
Color:	APHA: 20 max
Odor:	odorless
pH:	5.5-7.5 (50% aq. sol.)
Vapor Pressure:	0.12mmHg @20 deg C
Viscosity:	23.3 cSt @20 deg C
Boiling Point:	196 - 198 deg C @760mmHg
Freezing/Melting Point:	-13 deg C (8.60°F)
Autoignition Temperature:	413 deg C (775.40 deg F)
Flash Point:	116 deg C (240.80 deg F)
Explosion Limits: Lower:	3.2 Vol %
Explosion Limits: Upper:	28 Vol %
Decomposition Temperature:	Not available
Solubility in water:	miscible with water
Specific Gravity/Density:	1.113
Molecular Formula:	C2H6O2
Molecular Weight:	62.06

Section 10 - Stability and Reactivity

Chemical Stability:	Stable at room temperature in closed containers under normal storage and handling conditions. Hygroscopic: absorbs moisture or water from the air.
Conditions to Avoid:	High temperatures, incompatible materials, ignition sources, moisture, contact with water.
Incompatibilities with Other Materials	Oxidizing agents, strong acids, strong bases, bromine trifluoride, chlorine trifluoride, liquid chlorine, nitric acid, perchlorates, silver perchlorate, sodium hydroxide, sodium peroxide, sulfuric acid, oxygen, potassium permanganate, ozone, chlorosulfonic acid, oleum, chromium trioxide, bromine pentafluoride, chromic anhydride, phosphorus pentasulfide, silvered-copper wire, titanium butoxide, ammonium dichromate, silver chlorate, sodium chloride, uranyl nitrate.
Hazardous Decomposition Products	Carbon monoxide, carbon dioxide, acrid smoke and fumes.
Hazardous Polymerization	Will not occur.

Section 11 - Toxicological Information

RTECS#:	CAS# 107-21-1: KW2975000
LD50/LC50:	RTECS: **CAS# 107-21-1:** Draize test, rabbit, eye: 500 mg/24H Mild; Draize test, rabbit, eye: 100 mg/1H Mild; Draize test, rabbit, eye: 0.012 ppm/3D; Draize test, rabbit, eye: 1440 mg/6H Moderate; Oral, mouse: LD50 = 5500 mg/kg;

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	Oral, rat: LD50 = 4700 mg/kg; Skin, rabbit: LD50 = 9530 uL/kg;
Carcinogenicity:	Ethylene glycol - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Other:	See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Ecotoxicity:	Fish: Goldfish: >5000 mg/l; 24H; LD50 Fish: Guppy: 493000 ppm; 7 days; LC50 Fish: Rainbow trout: 18500 mg/l; 96H; LC50
Other:	Biodegradable. This chemical is not likely to bioconcentrate. Avoid entering into waters or underground water. log POW: -1.3

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

	IATA	IMO	RID/ADR
Shipping Name:	Not regulated as a hazardous material	Not regulated as a hazardous material	Not regulated as a hazardous material
Hazard Class:			
UN Number:			
Packing Group:			

USA RQ: CAS# 107-21-1: 5000 lb final RQ; 2270 kg final RQ

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XN

Risk Phrases:

- R 22 Harmful if swallowed.

Safety Phrases:

WGK (Water Danger/Protection)

- CAS# 107-21-1: 0

Canada

- CAS# 107-21-1 is listed on Canada's DSL List

US Federal

- TSCA
- CAS# 107-21-1 is listed on the TSCA Inventory.

Section 16 - Other Information

MSDS Creation Date:	July 22, 2015
Revision #0 Date	

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