

SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name: Ethylene Glycol
CAS number: 107-21-1
Synonyms: Monoethylene glycol; 1,2-Ethanediol.

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified Uses : Laboratory chemicals.

1.3 Details of the supplier of the safety data sheet

Company : Lab Alley, LLC
22111 Highway 71 West, Suite 601
Spicewood, Texas 78669
U.S.A.
Telephone : 512-668-9918
Fax : 512-886-4008

1.4 Emergency telephone

Emergency Phone # : US & Canada: 1-800-535-5053 INFOTRAC
International 1-352-323-3500 INFOTRAC

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute oral toxicity (Category 4)
Specific target organ toxicity (single exposure) (Category 3)
Target Organs - Central nervous system (CNS)
Specific target organ toxicity - (repeated exposure) (Category 2)
Target Organs - Kidney, Liver.

2.2 GHS Label elements, including precautionary statements

Pictogram:



Signal Word:

Warning

Hazard statement(s):

Harmful if swallowed. May cause drowsiness or dizziness. May cause damage to organs through prolonged or repeated exposure

Precautionary statement(s):

Prevention - Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Do not breathe dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. **Response** - Get medical attention/advice if you feel unwell. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. Store in a well-ventilated place. Keep container tightly closed. Store locked up. Dispose of contents/container to an approved waste disposal plant.

Hazards not otherwise classified

None known.

SECTION 3: Composition/information on ingredients

3.1 Components

Ingredient	CAS Number	Percent	Hazardous Chemical
Ethylene glycol	107-21-1	>95	No

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice:

Show this safety data sheet to the doctor in attendance.

In case of inhalation:

Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Get medical attention immediately if symptoms occur.

In case of eye contact:

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.

In case of skin contact:

Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur.

In case of ingestion:

Do not induce vomiting. Call a physician or Poison Control Center immediately.

4.2 Most important symptoms and effects, both acute and delayed

No information available.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable (and unsuitable) extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Specific hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.

5.3 Special protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

5.4 Further information

None.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protective equipment.

6.2 Environmental precautions

Should not be released into the environment. See Section 12 for additional ecological information.

6.3 Methods and materials for containment and cleaning up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

No additional information available.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Wear personal protective equipment. Ensure adequate ventilation. Do not breathe vapors or spray mist. Avoid contact with skin, eyes and clothing.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition.

SECTION 8. Exposure controls/personal protection

8.1 Occupational exposure limits

This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ethylene glycol	Ceiling: 100 mg/m ³	(Vacated) Ceiling: 50 ppm (Vacated) Ceiling: 125 mg/m ³	

Component	Quebec	Mexico OEL (TWA)	Ontario TWAEV
Ethylene glycol	Ceiling: 50 ppm Ceiling: 127 mg/m ³	Ceiling: 100 mg/m ³	CEV: 100 mg/m ³

8.2 Exposure controls

Appropriate engineering controls

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment

Eye/face protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory protection

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.

Control of environmental exposure

Should not be released into the environment. See Section 12 for additional ecological information.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Viscous liquid.
Appearance	No information available.
Odor	Odorless.
Odor Thresh	No information available.
pH	5.5-7.5 50% aq. sol
Melting Point/Range	-13 °C / 8.6 °F
Boiling Point/Range	>196 - 198 °C / 384.8 - 388.4 °F @ 760 mmHg
Flash Point	116 °C / 240.8 °F
Evaporation Rate	No information available.
Flammability (solid, gas)	No information available.
Flammability or explosive limit	
	Upper : 15.3 vol%
	Lower : 3.2 vol%

Vapor Pressure	0.12 mmHg @ 20 °C
Vapor Density	2.14 (Air = 1.0)
Density	1.113
Solubility	Soluble in water
Partition coefficient; n-octanol/water	No information available.
Autoignition Temp	413 °C / 775.4 °F
Decomposition Temp	>500°C
Viscosity	21 cP (20°C)
Molecular Formula	C2H6O2
Molecular Weight	62.07
VOC Content(%)	No information available.
Oxidizing properties	No information available.

9.2 Other safety information

None.

SECTION 10: Stability and reactivity

10.1 Reactivity

None known, based on information available.

10.2 Chemical stability

Hygroscopic.

10.3 Possibility of hazardous reactions

None under normal processing.

10.4 Conditions to avoid

Incompatible products. Excess heat. Exposure to moist air or water.

10.5 Incompatible materials

Strong oxidizing agents, Strong acids, Strong bases, Aldehydes.

10.6 Hazardous decomposition products

Carbon monoxide (CO), Carbon dioxide (CO2).

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product Information

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Citric acid	4000 - 10200 mg/kg (Rat)	9530 µL/kg (Rabbit) 10600 mg/kg (Rat)	Not listed

Skin corrosion/irritation

May cause eye, skin, and respiratory tract irritation.

Serious eye damage/eye irritation

May cause eye, skin, and respiratory tract irritation.

Respiratory or skin sensitization

No information available.

Germ cell mutagenicity

No information available.

Carcinogenicity

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Ethylene glycol	107-21-1	Not listed	Not listed	Not listed	Not listed	Not listed

Reproductive toxicity

Experiments have shown reproductive toxicity effects on laboratory animals.

Specific target organ toxicity - single exposure

Central nervous system (CNS)

Specific target organ toxicity - repeated exposure

Kidney Liver

Aspiration hazard

See actual entry in RTECS for complete information.

Chronic effects

No information available.

11.2 Additional information

None.

SECTION 12. Ecological information**12.1 Toxicity**

Ecotoxicity: Do not empty into drains.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Ethylene glycol	6500 - 13000 mg/L EC50 96 h	16000 mg/L LC50 96 h 40000 - 60000 mg/L LC50 96 h 40761 mg/L LC50 96 h 27540 mg/L LC50 96 h 14 -18 mL/L LC50 96 h 41000 mg/L LC50 96 h	Not listed	46300 mg/L EC50 = 48 h

12.2 Persistence and Degradability

No information available.

12.3 Bioaccumulative Potential

No information available.

12.4 Mobility in Soil

log Pow: -1.93

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Endocrine disrupting properties

No information available.

12.7 Other adverse effects

See actual entry in RTECS for complete information.

SECTION 13. Disposal considerations

13.1 Waste Disposal Methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

SECTION 14: Transport information

DOT

UN-No Not Regulated
Proper Shipping Name
Hazard Class
Subsidiary Hazard Class
Packing Group

IATA

UN-No Not Regulated.
Proper Shipping Name
Hazard Class
Subsidiary Hazard Class
Packing Group

IMDG/IMO

UN-No Not Regulated.
Proper Shipping Name
Hazard Class
Subsidiary Hazard Class
Packing Group

TDG

UN-No Not Regulated.
Proper Shipping Name
Hazard Class
Subsidiary Hazard Class
Packing Group

SECTION 15: Regulatory information

International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	IECSC	KECL
Ethylene glycol	X	X	-	203-473-3	-		X	X	X	X	X

Legend:

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b)

Not applicable

SARA 313

Component	CAS-No	Weight %	SARA 313 - Threshold Values %
Ethylene glycol	107-21-1	! 95	1.0

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

Not applicable

Clean Air Act

Component	HAPS Data	Class 1 Ozone Depleters	Class 2 Ozone Depleters
Ethylene glycol	X		-

OSHA Occupational Safety and Health Administration
Not applicable

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Component	Hazardous Substances RQs	CERCLA EHS RQs
Ethylene glycol	5000 lb	-

California Proposition 65

This product does not contain any Proposition 65 chemicals

State Right-to-Know

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Ethylene glycol	X	X	X	X	-

U.S. Department of Transportation

Reportable Quantity (RQ):	Y
DOT Marine Pollutant	N
DOT Severe Marine Pollutant	N

U.S. Department of Homeland Security

This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade

Slight risk, Grade 1

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

WHMIS Hazard Class

D1B Toxic materials
D2A Very toxic materials



SECTION 16: Other information

Issue Date	02/02/2010
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Disclaimer:

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.