

Ethylene Glycol

MSDS # 277.00

Section 1: Product and Company Identification
Ethylene Glycol
Synonyms/General Names: 1, 2-ethanediol

Product Use: For educational use only

Manufacturer: Columbus Chemical Industries, Inc., Columbus, WI 53925.

24 Hour Emergency Information Telephone Numbers
CHEMTREC (USA): 800-424-9300
CANUTEC (Canada): 613-424-6666

ScholAR Chemistry; 5100 W. Henrietta Rd, Rochester, NY 14586; (866) 260-0501; www.Scholarchemistry.com

Section 2: Hazards Identification
Clear viscous liquid; odorless.
HMS (0 to 4)

Health	2
Fire Hazard	1
Reactivity	0

WARNING! Combustible liquid and moderately toxic by ingestion and inhalation.

Target organs: Central nervous system, kidneys, liver.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Section 3: Composition / Information on Ingredients

Ethylene Glycol (107-21-1), 100%

Section 4: First Aid Measures
Always seek professional medical attention after first aid measures are provided.
Eyes: Immediately flush eyes with excess water for 15 minutes, lifting lower and upper eyelids occasionally.

Skin: Immediately flush skin with excess water for 15 minutes while removing contaminated clothing.

Ingestion: Call Poison Control immediately. Rinse mouth with cold water. Give victim 1-2 cups of water or milk to drink. Induce vomiting immediately.

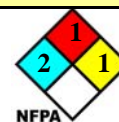
Inhalation: Remove to fresh air. If not breathing, give artificial respiration.

Section 5: Fire Fighting Measures

Combustible liquid. When heated to decomposition, emits acrid fumes.

Protective equipment and precautions for firefighters: Use foam or dry chemical to extinguish fire.

Firefighters should wear full fire fighting turn-out gear and respiratory protection (SCBA). Cool container with water spray. Material is not sensitive to mechanical impact or static discharge.


Section 6: Accidental Release Measures

Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Sweep up spill and place in sealed bag or container for disposal. Wash spill area after pickup is complete. See Section 13 for disposal information.

Section 7: Handling and Storage
Green
Handling: Use with adequate ventilation and do not breathe dust or vapor. Avoid contact with skin, eyes, or clothing. Wash hands thoroughly after handling.

Storage: Store in General Storage Area [Green Storage] with other items with no specific storage hazards. Store in a cool, dry, well-ventilated, locked store room away from incompatible materials.

Section 8: Exposure Controls / Personal Protection

 Use ventilation to keep airborne concentrations below exposure limits. Have approved eyewash facility, safety shower, and fire extinguishers readily available. Wear chemical splash goggles and chemical resistant clothing such as gloves and aprons. Wash hands thoroughly after handling material and before eating or drinking. Use NIOSH-approved respirator with an organic cartridge. Exposure guidelines: Ethylene Glycol: OSHA PEL: N/A, ACGIH: TLV: N/A, STEL: 100 mg/m³ ceiling.

Section 9: Physical and Chemical Properties

Molecular formula	HOCH ₂ CH ₂ OH	Appearance	Clear viscous liquid.
Molecular weight	62.07.	Odor	Odorless.
Specific Gravity	1.11 g/mL @ 20°C.	Odor Threshold	N/A.
Vapor Density (air=1)	2.14.	Solubility	Soluble in water, alcohol, and acetone.
Melting Point	-12.69°C	Evaporation rate	N/A (<i>Butyl acetate = 1</i>).
Boiling Point/Range	196-198°C.	Partition Coefficient	N/A (<i>log P_{ow}</i>).
Vapor Pressure (20°C)	0.05 mm/Hg.	pH	N/A.
Flash Point:	111° C (232°F).	LEL	3.2%.
Autoignition Temp.:	398° C (748°F).	UEL	15.3%.

N/A = Not available or applicable

Section 10: Stability and Reactivity

Avoid heat and moisture.

Stability: Stable under normal conditions of use and storage.**Incompatibility:** Strong oxidizing agents, acids, bases.**Shelf life:** Poor shelf life, store in a cool, dry environment.**Section 11: Toxicology Information****Acute Symptoms/Signs of exposure:** *Eyes:* Redness, tearing, itching, burning, conjunctivitis. *Skin:* Redness, itching.**Ingestion:** Early symptoms mimic alcohol inebriation and are followed by nausea, vomiting and abdominal pain. Immediate treatment is important to avoid developing renal failure and liver damage. **Inhalation:** Irritation of mucous membranes, coughing, wheezing, shortness of breath,**Chronic Effects:** No information found.**Sensitization:** none expected*Ethylene Glycol:* LD50 [oral, rat]; 4700 mg/kg; LC50 [rat]; N/A; LD50 Dermal [rabbit]; 555 mg/mild*Material has not been found to be a carcinogen nor produce genetic, reproductive, or developmental effects.***Section 12: Ecological Information****Ecotoxicity (aquatic and terrestrial):** Ecological impact not determined**Section 13: Disposal Considerations**

Check with all applicable local, regional, and national laws and regulations. Local regulations may be more stringent than regional or national regulations. Small amounts of this material may be suitable for sanitary sewer or trash disposal.

Section 14: Transport Information**DOT Shipping Name:** Not regulated by DOT.**Canada TDG:** Not regulated by TDG.**DOT Hazard Class:****Hazard Class:****Identification Number:****UN Number:****Section 15: Regulatory Information****EINECS:** Listed (203-473-3) .**WHMIS Canada:** D2A: Very toxic material causing other toxic effects.**TSCA:** All components are listed or are exempt.**California Proposition 65:** Not listed.

The product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Section 16: Other Information**Current Issue Date:** January 23, 2009

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