Ethylene Glycol ACS Grade

ACS Grade

Standard	Revised	Emergency
OSHA HCS 2024 · GHS Rev. 7	2026-11-12	Chemtel 1-800-255-3924 (24/7)

1 Identification

Product Identifier	Ethylene Glycol ACS Grade
Grade	ACS Grade
CAS Number	107-21-1
Chemical Formula	C2H6O2
Molecular Weight	62.07 g/mol
Manufacturer	Alliance Chemical 204 South Edmond Street, Taylor, TX 76574
Emergency Phone	Chemtel 1-800-255-3924 (24/7)
Synonyms	1,2-Ethanediol; ethane-1,2-diol; monoethylene glycol (MEG); glycol
Recommended Use	Laboratory reagent (ACS grade); heat-transfer and antifreeze formulations; polyester, resin and chemical synthesis.
Restrictions on Use	Not for food, drug or cosmetic use. Toxic if swallowed in quantity (it tastes sweet): keep away from children and pets, and do not store in food or drink containers.

2 Hazard Identification



Irritant / harmful



Health hazard

Classification	Acute toxicity (oral), Category 4 Specific target organ toxicity, repeated exposure, Category 2
Signal Word	**Warning**
Hazard Statements	H302 Harmful if swallowed H373 May cause damage to organs through prolonged or repeated exposure

Precautionary Statements

P260 Do not breathe dust, fume, gas, mist, vapors or spray.

P264 Wash hands and face thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.

P314 Get medical advice or attention if you feel unwell.

P330 Rinse mouth.

P501 Dispose of contents and container in accordance with local, regional, national, and international regulations.

Classification, hazard (H) and precautionary (P) statements and pictograms per OSHA HCS 2024 (29 CFR 1910.1200, Appendices A–C), aligned with GHS Rev. 7.

3 Composition / Information on Ingredients

Component	CAS No.	Formula	Concentration
Ethylene Glycol	107-21-1	C2H6O2	99.43-100% (w/w)

Concentrations are nominal; lot-specific values appear on the Certificate of Analysis. Components not contributing to classification are omitted.

4 First-Aid Measures

Eyes
Rinse with plenty of water for at least 15 minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek medical attention immediately.

Skin
Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing. Wash with soap. Get medical attention immediately.

Inhalation
Move person to fresh air and keep comfortable for breathing. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately.

Ingestion
Do Not Induce Vomiting! Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention immediately.

Most Important Symptoms and Effects
Ingestion may cause nausea, vomiting and abdominal pain; larger amounts may cause systemic poisoning.

Immediate Medical Attention and Special Treatment
Treat symptomatically. Get medical attention if symptoms develop or persist.

5 Fire-Fighting Measures

Suitable Extinguishing Media
Use water spray, alcohol-resistant foam, dry chemical, or CO2. Use measures appropriate to local circumstances.

Unsuitable Extinguishing Media
Do not use a solid water stream as it may scatter and spread fire.

Specific Hazards Arising from the Chemical
Containers may rupture when heated.

Protective Equipment
Wear self-contained breathing apparatus and full protective clothing.

Hazardous Combustion Products
Carbon monoxide and carbon dioxide on combustion; aldehydes and other carbonyl compounds when overheated.

6 Accidental Release Measures

Personal Precautions
Use PPE as described in Section 8. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental Precautions
Prevent leakage or spillage from entering drains, sewers, or waterways.

Containment & Cleanup
Absorb with inert material. Collect in appropriate waste container. Dispose per applicable regulations.

7 Handling and Storage

Safe Handling	Use with adequate ventilation. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Keep container closed when not in use.
Safe Storage	Store in a cool, dry, well-ventilated area. Keep away from incompatible materials (see Section 10). Keep containers tightly closed.
Specific Storage Precautions	Keep tightly closed (hygroscopic) in a cool, dry place away from oxidizers. Store separately from food and drink.

8 Exposure Controls / Personal Protection

Occupational Exposure Limits

Limit	Value
ACGIH TLV	25 ppm TWA / 50 ppm STEL; 10 mg/m³ STEL (inhalable)

Engineering Controls	Use adequate ventilation. Provide eyewash stations and quick-drench showers accessible to areas of use.
Eye/Face Protection	Wear chemical safety goggles or face shield.
Skin Protection	Wear chemical-resistant gloves and protective clothing.
Respiratory Protection	Use NIOSH-approved respirator if exposure limits are exceeded or irritation occurs.

Exposure limits sourced from NIOSH Pocket Guide, OSHA 29 CFR 1910.1000 and ACGIH TLVs.

9 Physical & Chemical Properties

Appearance	Clear, colorless liquid
Odor	Odorless
Odor Threshold	No data available
pH	5.5–7.5 (50% aqueous solution)
Melting Point / Freezing Point	-13 °C (9 °F)
Boiling Point	196–198 °C (385–388 °F) at 760 mmHg
Flash Point	111 °C (232 °F), closed cup
Evaporation Rate	No data available
Flammability (solid, gas)	No data available
Upper/Lower Flammability or Explosive Limits	No data available
Vapor Pressure	0.12 mmHg (0.016 kPa) at 20 °C
Vapor Density	No data available
Relative Density	1.115 at 20/20 °C (water = 1)
Solubility	Completely miscible with water
Partition Coefficient (n-octanol/water)	log Kow -1.36
Auto-ignition Temperature	413 °C (775 °F)
Decomposition Temperature	No data available
Viscosity	16.1 mPa·s at 25 °C

Particle Characteristics	Not applicable
Form	Liquid
Color	10
Density	1.1133 g/cm^3 at 20 °C

Values shown reflect product-specific canonical data. Lot-specific ranges may vary; see the Certificate of Analysis for the shipped lot.

10 Stability and Reactivity

Reactivity	Not reactive under normal conditions of use and storage.
Chemical Stability	Stable under recommended storage conditions.
Possibility of Hazardous Reactions	None under normal processing conditions.
Conditions to Avoid	High heat (above 40 °C in storage), open flame, and moisture (hygroscopic).
Incompatible Materials	Strong oxidizing agents, strong acids and bases, aldehydes, alkali and alkaline-earth metals, aluminum compounds.
Hazardous Decomposition Products	Carbon monoxide and carbon dioxide on combustion; aldehydes and other carbonyl compounds when overheated.

11 Toxicological Information

See below for route-specific acute toxicity data.

Likely Routes of Exposure	Inhalation, skin contact, eye contact, ingestion.
Symptoms	Ingestion may cause nausea, vomiting and abdominal pain; larger amounts may cause systemic poisoning.
Delayed and Chronic Effects	Prolonged or repeated exposure may damage organs.

Route	Value
LD50 Oral (rat)	4,700–7,712 mg/kg (rat). Human lethal dose about 1,400–1,600 mg/kg, the basis for H302.
LD50 Dermal (rabbit)	> 10,600 mg/kg
LC50 Inhalation (rat, 4h)	> 2.5 mg/L (aerosol, 6 h)

Carcinogen Classification

Agency	Status
IARC	Not listed as carcinogen.
NTP	Not listed as carcinogen.
OSHA	Not listed as carcinogen.

12 Ecological Information

Ecotoxicity	Daphnia EC50: 10000 mg/L (48 h, Daphnia magna (freshwater, static))
Persistence & Degradability	Not persistent; low bioconcentration, not expected to volatilize

Bioaccumulative Potential	log Kow −1.36
Mobility in Soil	Very high mobility in soil (estimated Koc ≈ 0.2)

13 Disposal Considerations

Dispose of contents/container in accordance with applicable federal, state, and local regulations. Do not dispose of into drains or waterways.

EPA RCRA Waste Codes	Not a listed or characteristic hazardous waste as supplied; used glycol may pick up metals and become hazardous — test before disposal.

14 Transport Information

Not regulated for transport under US DOT 49 CFR Subchapter C, IMDG, or IATA DGR in packages holding less than the reportable quantity below.

Hazardous substance (49 CFR 171.8)	A single package holding 5,000 lb (2,270 kg), about 530 US gal, or more of this product contains the reportable quantity (RQ) of a hazardous substance and is regulated as a hazardous material.
Reportable quantity (49 CFR 172.101 Appendix A)	Ethylene glycol — RQ 5,000 lb (2,270 kg)
Shipping description (package at or above the RQ)	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Ethylene glycol), 9, III, RQ

15 Regulatory Information

Inventory / List	Status
California Proposition 65	Listed (since 2015-06-19)
US EPA TSCA Active Inventory	Listed
EPCRA SARA 313 (TRI)	Listed
CERCLA Reportable Quantity (RQ)	Ethylene glycol (CAS 107-21-1) 5,000 lb (2,270 kg), about 540 US gal. EPCRA Section 313 (TRI) listed, de minimis 1.0%.

SARA 311/312 hazard categories correspond to the GHS classification in Section 2. Data retrieved as of: California Proposition 65 2026-11-02; US EPA TSCA Active Inventory 2026-11-02; EPCRA SARA 313 (TRI) 2026-11-02.

16 Other Information

Revision Date	2026-11-12
Format	16-section format per OSHA HCS 2024 (29 CFR 1910.1200, Appendix D), aligned with GHS Rev. 7.

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