Safety Data Sheet · OSHA HCS 2024

# Ethylene Glycol 50/50 Technical Grade

Technical · 50% v/v

| 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 50/50 Technical Grade |
| Grade | Technical |
| Concentration | 50% v/v |
| CAS Number | 107-21-1 |
| Chemical Formula | C2H6O2 |
| Molecular Weight | 62.07 g/mol |
| Manufacturer | Alliance Chemical<br>204 South Edmond Street, Taylor, TX 76574 |
| Emergency Phone | Chemtel 1-800-255-3924 (24/7) |
| Synonyms | Ethylene glycol solution; aqueous ethylene glycol; glycol/water heat-transfer fluid |
| Recommended Use | Ready-to-use heat-transfer fluid and antifreeze for closed-loop cooling and heating systems, chillers and process equipment. |
| Restrictions on Use | Not for food, drug or cosmetic use, and not for potable-water systems. Harmful if swallowed and 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<br>Specific target organ toxicity, repeated exposure, Category 2 |
| Signal Word | **Warning** |
| Hazard Statements | H302 Harmful if swallowed<br>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 | $C_2H_6O_2$ | 49.5-50.5% v/v |
| Water | 7732-18-5 | $H_2O$ | Balance (v/v) |

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 of the dried residue; glycolic and other organic acids when overheated or oxidized in service.

## 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

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| 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 closed in a cool place away from oxidizers. Protect from freezing below the rated freeze point. 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) |

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| 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

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|---|---|
| Appearance | Clear, colorless to pale liquid |
| Odor | Mild, characteristic |
| Odor Threshold | No data available |
| pH | 7.7 – 8.7 |
| Melting Point / Freezing Point | Freeze point approx. -37 °C (-35 °F) typical; -36.7 °C (-34 °F) max, at 50/50 v/v (52.7 wt%) ethylene glycol |
| Boiling Point | ~108 °C |
| Flash Point | Not flammable (aqueous solution) |
| Evaporation Rate | No data available |
| Flammability (solid, gas) | No data available |
| Upper/Lower Flammability or Explosive Limits | No data available |
| Vapor Pressure | No data available |
| Vapor Density | No data available |
| Relative Density | 1.070 at 20/20 °C (water = 1) |
| Solubility | Miscible with water |
| Partition Coefficient (n-octanol/water) | No data available |
| Auto-ignition Temperature | No data available |
| Decomposition Temperature | No data available |

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|---|---|
| Viscosity | No data available |
| Particle Characteristics | Not applicable |
| Density | 1.0679 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

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| 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 | Contact with incompatible materials; boiling dry (concentrates the glycol); freezing below the rated freeze point. |
| Incompatible Materials | Strong oxidizing agents, strong acids and bases, aldehydes, alkali metals. |
| Hazardous Decomposition Products | Carbon monoxide and carbon dioxide on combustion of the dried residue; glycolic and other organic acids when overheated or oxidized in service. |

## 11 Toxicological Information

See below for route-specific acute toxicity data.

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| 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 | Ethylene glycol 4,700 mg/kg (rat); human lethal dose about 1,400–1,600 mg/kg. ATE for this 52.7 wt% blend about 950 mg/kg (from the 500 mg/kg acute-toxicity estimate), the basis for H302. |
| LD50 Dermal (rabbit) | > 10,600 mg/kg (ethylene glycol) |

### Carcinogen Classification

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

## 12 Ecological Information

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|---|---|
| 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.

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| EPA RCRA Waste Codes | Not a listed or characteristic hazardous waste as supplied; used coolant may pick up metals (lead, cadmium, chromium) 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.

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|---|---|
| Hazardous substance (49 CFR 171.8) | A single package holding 9,300 lb (4,260 kg), about 1,040 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 as ethylene glycol (ingested) (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 9,500 lb (1,065 US gal) of this blend at SG 1.068; no single Alliance package reaches it. 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

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|---|---|
| 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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