SAFETY DATA SHEET

50% Propylene Glycol Inhibited

Revised: 11/04/2026

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: 50% Propylene Glycol Inhibited

Synonyms: Inhibited propylene glycol 50% premix; PG 50/50 heat-transfer fluid; propane-1,2-diol aqueous solution with corrosion inhibitors

CAS Number: Mixture (see Section 3) | **Product Code:** PG50-INH

Grade/Purity: Inhibited heat-transfer fluid (nitrite-containing hybrid organic-acid inhibitor package). Not USP/NF grade.

Product Type: Glycols

Product Use: Closed-loop heat-transfer and freeze-protection fluid (HVAC, chilled-water, hydronic and process cooling)

Restrictions on Use: Not for food-contact, incidental-food-contact or potable-water service; not USP/NF grade.

Manufacturer/Supplier: Alliance Chemical, 204 South Edmond St, Taylor, Texas 76574

Information: 512-365-6838 | www.alliancechemical.com

Emergency: CHEMTEL - 800-255-3924 (24 Hours/Day, 7 Days/Week)

2. HAZARDS IDENTIFICATION

Signal Word: None

GHS Pictograms:

None assigned

Hazard Statements:

Not Classified	Not classified as hazardous under 29 CFR 1910.1200 (GHS). Classification derived from ingredient data by the additivity and cut-off methods of 29 CFR 1910.1200 Appendix A; the finished mixture has not been tested as a whole. Acute oral toxicity: calculated ATEmix approx. 12,800 mg/kg (propylene glycol, triethanolamine and sodium nitrite each at its maximum content, sodium nitrite 0.44%), well above the 2,000 mg/kg upper limit of the lowest oral category; not classified. Carcinogenicity: no category assigned. The IARC Group 2A entry in Section 11 is an exposure circumstance, ingested nitrate or nitrite under conditions that result in endogenous nitrosation, not sodium nitrite as a substance, and sodium nitrite has no harmonized carcinogenicity classification (EU CLH: Ox. Sol. 3, Acute Tox. 3, Eye Irrit. 2, Aquatic Acute 1).

Precautionary Statements:

Not Classified	No specific GHS precautionary statements required.

Hazards Not Otherwise Classified: None. Spilled product is slippery.

3. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	% MIN	% MAX	CAS #	EINECS# / ELINCS#	FORMULA	MOLECULAR WEIGHT
Propylene Glycol	50.0 (v/v)	51.0 (v/v)	57-55-6	200-338-0	$C_3H_8O_2$	76.09 g/mol
Corrosion inhibitor package (nitrite-containing hybrid organic-acid)	1.8	2.2	Mixture		Mixture	Varies
— of which Sodium Nitrite	0.18	0.44	7632-00-0	231-555-9	$NaNO_2$	69.00 g/mol
— of which Triethanolamine	0	0.22	102-71-6	203-049-8	$C_6H_{15}NO_3$	149.19 g/mol
— of which Sodium Benzoate	0	0.07	532-32-1	208-534-8	$C_7H_5NaO_2$	144.10 g/mol
— of which Sodium Molybdate Dihydrate	0	0.05	10102-40-6	231-551-7 (anhydrous)	$Na_2MoO_4{\cdot}2H_2O$	241.95 g/mol
Water	Balance		7732-18-5	231-791-2	H_2O	18.02 g/mol

Propylene glycol is stated in % v/v (about 50.7–51.8 % w/w); every other component is % w/w. The corrosion inhibitor package is dosed at 2.0% (range 1.8–2.2%) by weight of the finished blend; component ranges above are calculated over that dose range from the inhibitor manufacturer's composition ranges. The remaining package ingredients (organic-acid corrosion inhibitors, less than 0.44% of the blend) are not listed as hazardous on the inhibitor manufacturer's SDS. Their specific chemical identity is withheld by the inhibitor manufacturer as a trade secret and is not held by Alliance Chemical. A treating physician or other health professional may request it through Alliance Chemical (512-365-6838), which will request it from the inhibitor manufacturer under 29 CFR 1910.1200(i).

4. FIRST-AID MEASURES

Eyes	Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Get medical advice if irritation persists.
Skin	Remove contaminated clothing. Wash skin with soap and water. Get medical advice if irritation develops.
Inhalation	Move to fresh air. Get medical advice if symptoms occur (not expected under normal use; product has low volatility).
Ingestion	Rinse mouth with water. Do not induce vomiting. Call a poison control center or physician if a large amount is swallowed.
Most Important Symptoms	Mild, transient eye or skin irritation on direct contact. Swallowing large amounts may cause nausea; nitrite ingestion in large amounts can cause methemoglobinemia (bluish skin, headache, dizziness). Delayed effects are not expected from incidental exposure at the concentrations present (see Section 11 regarding ingested nitrite).
Medical Attention	No immediate medical attention needed for incidental contact. For large ingestion, treat symptomatically; note the product contains sodium nitrite (0.18–0.44%).

5. FIRE-FIGHTING MEASURES

Suitable Media	Use water spray, alcohol-resistant foam, dry chemical, or CO2. Use measures appropriate to local circumstances.
Unsuitable Media	None known. The product is an aqueous solution and does not burn; use media suited to the surrounding fire.
Protective Equipment	For fires involving surrounding materials, firefighters should wear self-contained breathing apparatus and full protective clothing.
Combustion Products	Aqueous solution; will not sustain combustion. If dried residue is involved in fire: carbon oxides, nitrogen oxides, sodium oxides.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Use PPE as described in Section 8. Spilled product is slippery; keep unprotected people away from the spill until it is cleaned up.
Environmental	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.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Use adequate ventilation. Provide eyewash stations and quick-drench showers accessible to areas of use.

Occupational Exposure Limits:

COMPONENT	OSHA PEL	ACGIH TLV	NIOSH REL
Propylene Glycol (57-55-6)	Not established	Not established (OARS/AIHA WEEL 10 mg/m³ TWA, aerosol)	Not established
Triethanolamine (102-71-6)	Not established	5 mg/m³ TWA	Not established
Sodium Molybdate Dihydrate (10102-40-6), as Mo	5 mg/m³ TWA (soluble Mo compounds)	0.5 mg/m³ TWA, respirable (soluble Mo compounds)	Not established
Sodium Nitrite (7632-00-0)	Not established	Not established	Not established

Limits apply to mists/aerosols; exposure is not expected under normal closed-loop use.

Eyes	Wear chemical safety goggles or face shield.
Skin	Wear chemical-resistant gloves and protective clothing.
Inhalation	Use NIOSH-approved respirator if exposure limits are exceeded or irritation occurs.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear, colorless to pale yellow liquid (not dyed)
Odor	Mild, characteristic
Particle Characteristics	Not Applicable
pH	Typically 7.0–9.0 (ASTM D1287); measured value reported on the lot Certificate of Analysis
Melting Point	Freeze point approx. −33.7 °C (−28.6 °F) at 50 % v/v propylene glycol
Boiling Point	approx. 106 °C (223 °F) at 760 mmHg
Flash Point	None (aqueous solution; does not sustain combustion)
Vapor Pressure	approx. 14 mmHg at 20 °C (water-dominated, estimated by Raoult's law)
Vapor Density	Not available (water-dominated)
Odor Threshold	Not available
Auto-ignition / Decomposition Temperature	Not applicable (aqueous) / not available
Viscosity	Not determined; increases with propylene glycol concentration
Partition Coefficient (log Kow)	Propylene glycol: −0.92
Specific Gravity	1.043 at 20/20 °C (water = 1); density 1.0407 g/cm³ at 20 °C. Calculated from formulation; measured values are reported on the lot Certificate of Analysis
Solubility	Miscible with water
Molecular Formula	$C_3H_8O_2$ (propylene glycol component)
Molecular Weight	76.09 g/mol (propylene glycol component)

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under recommended storage conditions.
Hazardous Reactions	Nitrite can react with amines, including the triethanolamine in this product, to form N-nitrosamines; acid contact with the nitrite releases toxic nitrogen oxides. No hazardous reaction under normal use and storage.
Conditions to Avoid	Freezing in storage, prolonged storage above 38 °C (100 °F), contamination.
Incompatible Materials	Strong oxidizing agents; strong acids (acid contact with the nitrite releases toxic nitrogen oxides); amines and nitrosating agents (N-nitrosamine formation); galvanized (zinc) surfaces.
Decomposition Products	On drying and heating to decomposition: carbon oxides, nitrogen oxides, sodium oxides.

11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Skin and eye contact; accidental ingestion.
Acute Toxicity: Mixture not tested; see Section 2 for the derived classification. Component data:

COMPONENT	ORAL LD50	DERMAL LD50
Propylene Glycol (57-55-6)	20,000 mg/kg (rat)	20,800 mg/kg (rabbit)
Sodium Nitrite (7632-00-0), 0.18–0.44% of blend	85 mg/kg (rat)	Not determined
Triethanolamine (102-71-6)	6,400 mg/kg (rat)	>2,000 mg/kg (rabbit)

Skin / Eye, sensitization, mutagenicity, reproductive toxicity, STOT, aspiration: Not classified at the concentrations present (component data).

IARC	Sodium nitrite: Group 2A, probably carcinogenic to humans (IARC agent: ingested nitrate or nitrite under conditions that result in endogenous nitrosation, Vol. 94). Triethanolamine: Group 3 (not classifiable). No other component listed.
NTP	No component listed.
OSHA	No substance-specific standard in 29 CFR 1910 Subpart Z; not classified as a carcinogen under the Hazard Communication Standard (29 CFR 1910.1200) as supplied. See Section 2 and the scope note.
	Scope: the IARC evaluation addressed nitrate or nitrite ingested under conditions that result in endogenous nitrosation, not this product as supplied; nitrites can react with secondary and tertiary amines to form nitrosamines, which are potentially carcinogenic.

12. ECOLOGICAL INFORMATION

Ecotoxicity	Propylene glycol: algae ErC50 19,000 mg/L (96 h, Selenastrum capricornutum); Daphnia magna EC50 43,500 mg/L (48 h). Sodium nitrite is toxic to fish at low mg/L concentrations; at 0.18–0.44% in the blend the mixture is not classified for aquatic toxicity.
Persistence	Propylene glycol: readily biodegradable. Inhibitor components: data from manufacturer not available.
Bioaccumulation	Propylene glycol: log Kow −0.92, not expected to bioaccumulate.
Mobility in Soil	Propylene glycol: very high mobility (estimated Koc ≈ 1). Prevent entry into drains and waterways.

13. DISPOSAL CONSIDERATIONS

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

14. TRANSPORT INFORMATION

US DOT	Not regulated as dangerous goods.
IMDG	Not regulated as dangerous goods.
IATA/ICAO	Not regulated as dangerous goods.
Marine Pollutant	No

15. REGULATORY INFORMATION

TSCA Inventory	Propylene glycol, sodium nitrite, triethanolamine, sodium benzoate and sodium molybdate: listed, Active. Remaining proprietary package ingredients: per inhibitor manufacturer.
SARA 313 (TRI)	Contains sodium nitrite (CAS 7632-00-0, EPCRA 313 listed) at 0.18–0.44%, below the 1% de minimis concentration.
California Prop 65	No intentionally added ingredient is listed.
SARA 311/312	None. The mixture is not classified for any physical or health hazard category.
CERCLA	Sodium nitrite (CAS 7632-00-0) is a CERCLA hazardous substance, reportable quantity (RQ) 100 lb (40 CFR 302.4). At its 0.44% maximum sodium nitrite content, about 22,700 lb (about 2,600 gal) of this product contains 100 lb of sodium nitrite.

Data retrieved as of — TSCA Inventory: 2026-09-24; SARA 313 (TRI): 2026-09-24; California Prop 65: 2026-09-24

16. OTHER INFORMATION

Revision Date: 11/04/2026 (Version 2.2). Changes: propylene glycol stated in % v/v with its % w/w equivalent (Section 3) and the freeze point on that basis (Section 9); sodium nitrite scope note and OSHA row (Section 11); sodium nitrite oral LD50 and ATEmix (Sections 2 and 11). Version 2.1 (10/20/2026): relative density (Section 9) restated at 20/20 °C with the density at 20 °C. Version 2.0 (10/06/2026): inhibitor component ranges stated over the full dose range; classification rationale (Sections 2 and 11), nitrosamine reactivity (Section 10), CERCLA RQ (Section 15) and trade-secret statement (Section 3) added.

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