Technical Data Sheet

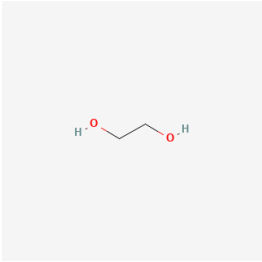
100% Ethylene Glycol Inhibited

Inhibited · 100%

Alliance Code	Revised	Revision
100-ethylene-glycol-inhibited	2026-11-09	1.8

CAS number

107-21-1



Structure · PubChem

Grade

Inhibited · 100%

Signal word

Warning

Hazards

Irritant / harmful | Health hazard | H302 H373

IDENTITY & COMPOSITION

PRODUCT NAME

100% Ethylene Glycol Inhibited

ALLIANCE CODE

100-ethylene-glycol-inhibited

GRADE

Inhibited

CONCENTRATION

98.0-100.0% w/w ethylene glycol

CAS NUMBER

107-21-1 PubChem

FORMULA

C2H6O2 PubChem

MOLECULAR WEIGHT

62.07 PubChem

PRODUCT TYPE

Mixture

SPECIFICATIONS

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Ethylene glycol content	98.0 - 100.0 % w/w	—	—	Interpreted
Reserve Alkalinity	3 ml min.	—	—	Interpreted

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Nitrite	2400 ppm min.	—	—	Interpreted
Freezing point, 50 vol % in water	-34 °F (-36.7 °C) maximum	—	ASTM D1177	Interpreted
Foaming tendency (volume / break time)	150 mL max / 5 s max	—	ASTM D1881	Interpreted
Chloride (as Cl)	25 ppm maximum	—	ASTM D3634	Interpreted

Values are reproduced from the current product reference. Source labels do not by themselves establish a supplier guarantee or a test result for your lot. Confirm applicable acceptance limits and request lot-specific documentation.

PHYSICAL & CHEMICAL PROPERTIES

PROPERTY	VALUE	SOURCE
Appearance	Clear viscous liquid	Adjudicated
Form	Liquid	Published reference
Odor	Odorless	Published reference
pH	Typically 7.0-9.0 as a 50% solution in water (ASTM D1287); measured value reported on the lot Certificate of Analysis	Adjudicated
Specific Gravity	1.110-1.125	Interpreted
Density	1.115 at 68 °F (USCG, 1999) - Denser than water; will sink	Published reference
Boiling Point	387.7 °F at 760 mmHg (NTP, 1992)	Adjudicated
Melting Point	About 9 °F (-13 °C) for the concentrate (ethylene glycol, NTP 1992); freeze point of a 50 vol % solution in water: -34 °F (-36.7 °C) max (ASTM D1177)	Adjudicated
Flash Point	232 °F (NTP, 1992)	Adjudicated
Vapor Pressure	0.06 mmHg at 68 °F ; 1 mmHg at 127.4 °F (NTP, 1992)	Published reference
Solubility (water)	greater than or equal to 100 mg/mL at 63.5 °F (NTP, 1992)	Published reference

FREEZE POINT BY DILUTION CONCENTRATE DILUTED WITH WATER

GLYCOL, % BY WEIGHT (W/W)	GLYCOL, % BY VOLUME (V/V)	FREEZE POINT, °F	FREEZE POINT, °C
20	18.1	17.9	-7.8
25	22.9	12.7	-10.7
30	27.7	6.7	-14.1
35	32.6	-0.2	-17.9
40	37.5	-8.1	-22.3
45	42.5	-17.5	-27.5
50	47.6	-28.9	-33.8
55	52.7	-42.0	-41.1
60	57.8	-54.9	-48.3

Typical values from published industry reference data for ethylene glycol and water, not a specification. Glycol content is shown on both bases: percent by weight (w/w) and percent by volume (v/v) of the finished solution.

REGULATORY & TRANSPORT

DOT / 49 CFR

UN NUMBER

Not regulated Adjudicated

HAZARD CLASS

Not regulated Adjudicated

PACKING GROUP

Not regulated Adjudicated

PROPER SHIPPING NAME

Not regulated Adjudicated

GHS / OSHA HCS 2024

SIGNAL WORD

Warning Adjudicated

H-CODES (HAZARD STATEMENTS)

H302, H373 Adjudicated

P-CODES (PRECAUTIONARY STATEMENTS)

P260, P264, P270, P301+P312, P314, P330, P501

Adjudicated

OCCUPATIONAL EXPOSURE LIMITS

OSHA PEL (29 CFR 1910.1000)

— no canonical

ACGIH TLV

25 ppm TWA / 50 ppm STEL; 10 mg/m^3 STEL (inhalable)

Adjudicated

NIOSH REL

— no canonical

NIOSH IDLH

— no canonical

Transport descriptions reflect 49 CFR 172.101 lookup at time of publication. Sourced data: NIOSH Pocket Guide for REL/IDLH, OSHA Z-Tables for PEL. Always verify against the latest regulatory text before shipment-critical decisions.

CATALOG EQUIVALENTS CROSS-REFERENCE VS MAJOR CHEMICAL SUPPLIERS

SIGMA-ALDRICH

SKU	GRADE	CONC.	MATCH	NOTES
293237	anhydrous, 99.8%	99.8 %	Unverified candidate	Sigma anhydrous; Alliance is inhibited (with corrosion inhibitor package).

Cross-references are informational. Confirm against the manufacturer's current specification before substitution. Competitor trademarks are property of their respective owners.

APPLICATIONS

Anti-freezing agent laballey.com

Used in the automobile industry laballey.com

Manufacturing of resins laballey.com

Synthesis of polyester fibers laballey.com

Dehydrating agent laballey.com

Polyester manufacturing and synthetic waxes production laballey.com

Applications are drawn from published manufacturer and supplier documentation; each is sourced. Suitability for a specific use is the buyer's to confirm.

STORAGE & HANDLING

RECOMMENDED STORAGE

Keep tightly closed (hygroscopic) in a cool, dry place away from oxidizers. Store separately from food and drink.

Adjudicated

HANDLING PRECAUTIONS

Chemical-resistant gloves and splash goggles. Ethylene glycol grades are toxic by ingestion and must be kept away from food, drink and animals; propylene glycol grades are not. Avoid contact with hot surfaces and hot process equipment. Inhibitor packages deplete in service — monitor rather than top up blindly.

Class-level guidance — not product-specific; the SDS controls.

INCOMPATIBILITIES

Strong oxidizing agents, strong acids and bases, aldehydes, alkali and alkaline-earth metals, aluminum compounds.

Adjudicated

SHELF LIFE

Consult Technical Services for product-specific shelf life

For full hazard, PPE, and emergency response guidance, refer to the Safety Data Sheet (SDS) for this product. The SDS controls in all cases where guidance differs.

PACKAGING & LOGISTICS

SHIPPING DESCRIPTION (US DOT)

```
Not regulated for transport.
```

A package holding 5,000 lb (2,270 kg) or more of this product contains a reportable quantity (RQ) and ships as:

```
UN3082, Environmentally hazardous substance, liquid, n.o.s. (Sodium nitrite, Ethylene glycol),
9, III, RQ
```

Confirm against shipping documents and carrier requirements before tender.

NMFC CLASS

55

REVISION HISTORY

Last reviewed 2026-11-09 by Andre Taki, Chief Commercial Officer, DOT Hazmat–certified (49 CFR 172.704).

VERSION	DATE	CHANGE	TRIGGER
1.8	2026-11-09	Canonical data updated: 1 field changed via the provenance/adjudication pipeline. • pH · canonical change (coa.data_provenance / adjudication)	canonical_change
1.7	2026-10-19	Canonical data updated: 2 fields changed via the provenance/adjudication pipeline. • meltingPoint · canonical change (coa.data_provenance / adjudication) • pH · canonical change (coa.data_provenance / adjudication)	canonical_change
1.6	2026-10-13	Canonical data updated: 4 fields changed via the provenance/adjudication pipeline. • storage_precautions · canonical change (coa.data_provenance / adjudication) • incompatible_materials · canonical change (coa.data_provenance / adjudication) • conditions_to_avoid · canonical change (coa.data_provenance / adjudication) • hazardous_decomposition_products · canonical change (coa.data_provenance / adjudication)	canonical_change
1.5	2026-10-08	Canonical data updated: 3 fields changed via the provenance/adjudication pipeline. • ghsClassification · canonical change (coa.data_provenance / adjudication) • hazard_h_codes · canonical change (coa.data_provenance / adjudication) • hazard_p_codes · canonical change (coa.data_provenance / adjudication)	canonical_change
1.4	2026-10-05	Canonical data updated: 1 field changed via the provenance/adjudication pipeline. • oel_acgih_tlv · canonical change (coa.data_provenance / adjudication)	canonical_change
1.3	2026-09-30	Canonical data updated: 4 fields changed via the provenance/adjudication pipeline. • boilingPoint · canonical change (coa.data_provenance / adjudication) • meltingPoint · canonical change (coa.data_provenance / adjudication) • flashPoint · canonical change (coa.data_provenance / adjudication) • appearance · canonical change (coa.data_provenance / adjudication)	canonical_change
1.2	2026-07-22	Canonical data updated: 4 fields changed via the provenance/adjudication pipeline. • unNumber · canonical change (coa.data_provenance / adjudication) • hazardClass · canonical change (coa.data_provenance / adjudication) • packingGroup · canonical change (coa.data_provenance / adjudication) • dotProperShippingName · canonical change (coa.data_provenance / adjudication)	canonical_change

VERSION	DATE	CHANGE	TRIGGER
1.1	2026-07-17	Canonical data re-verified: 7 fields updated against independent vendor SDSs, CLP Annex VI, 49 CFR, and OSHA HazCom 2024 (GHS classification, hazard/precautionary codes, signal word, physical properties as applicable). • countryOfOrigin · canonical adjudication / reground (coa.data_provenance) • dotSubsidiaryHazardClass · canonical adjudication / reground (coa.data_provenance) • ghsClassification · canonical adjudication / reground (coa.data_provenance) • hazard_h_codes · canonical adjudication / reground (coa.data_provenance) • hazard_p_codes · canonical adjudication / reground (coa.data_provenance) • hsCode · canonical adjudication / reground (coa.data_provenance) • signalWord · canonical adjudication / reground (coa.data_provenance)	canonical_change
1.0	2026-05-20	Initial URL-first TDS published from canonical chemistry registry.	initial

This Technical Data Sheet is provided for technical reference. The Safety Data Sheet (SDS) controls in all cases where guidance differs. Values reflect Alliance Chemical canonical data at time of generation; subsequent revisions are recorded in the Revision History above.