

TECHNICAL DATA SHEET

100% Ethylene Glycol Inhibited

Laboratory · 100%

CAS NUMBER	ALLIANCE CODE	GENERATED
107-21-1	100-ethylene-glycol-inhibited	2026-08-31
REVISION	REVIEWED	
1.2	2026-07-17 · Andre Taki	

IDENTITY & COMPOSITION

PRODUCT NAME	ALLIANCE CODE
100% Ethylene Glycol Inhibited	100-ethylene-glycol-inhibited
GRADE	CONCENTRATION
Laboratory	100%
CAS NUMBER	FORMULA
107-21-1 PubChem	C2H6O2 PubChem
MOLECULAR WEIGHT	PRODUCT TYPE
62.07 PubChem	mixture

SPECIFICATIONS

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Ethylene glycol content	97.8 % by volume	97.8 % by volume	—	Supplier specification
Reserve Alkalinity	3 ml min.	14.5	—	Supplier specification
Freeze Point	−34°F max.	−35°F	—	Supplier specification

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Nitrite	2400 ppm min.	2700 ppm	—	Supplier specification
Foaming tendency (volume / break time)	150 mL max / 5 s max	Passes test	ASTM D1881	Interpreted
Chloride (as Cl)	25 ppm maximum	1.0 ppm	ASTM D3634	Interpreted
Corrosion in glassware, six metals	Pass — weight loss within ASTM D3306 limits for all six metals	Passes test	ASTM D1384	Interpreted

Specification values are guaranteed limits. Typical values are representative of production lots and are not guaranteed. Lot-specific certificates of analysis ship with every order.

PHYSICAL & CHEMICAL PROPERTIES

One or more physical-property values are temporarily suppressed pending verification against vendor COA data. For complete properties refer to the Safety Data Sheet (SDS) or contact sales@alliancechemical.com.

PROPERTY	VALUE	SOURCE
Form	Liquid	Published reference
Odor	Odorless	Published reference
pH	9.0 – 10.5	Supplier specification
Specific Gravity (20 °C)	1.110–1.125	Supplier specification
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)	Published reference
Melting Point	–34 °F (–36.7 °C) maximum	Interpreted
Flash Point	232 °F (NTP, 1992)	Published reference
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

Polar solvent — purity vs. intended end-use (electronics, pharma, general industrial) is the dominant grade consideration. See application guidance for grade selection.

MATERIALS OF CONSTRUCTION SERVICE ENVELOPE ≈ 100%

MATERIAL	RATING	MAX T (°C)	NOTES	SOURCE
Buna-N (NBR) Elastomer	Fair	60	Acceptable for alcohols; poor for ketones.	Parker O-ring Chemical Compatibility
EPDM Elastomer	Fair	—	Good for alcohols, poor for esters	Cole-Parmer Chemical Compatibility
Viton (FKM) Elastomer	Fair	80	Swells in acetone and esters; avoid for those.	Parker O-ring Chemical Compatibility
FFKM (Kalrez) Fluoropolymer	Excellent	200	Premium ester / ketone sealing	Cole-Parmer Chemical Compatibility
PTFE Fluoropolymer	Excellent	200	Universal solvent compatibility.	Cole-Parmer Chemical Compatibility
Borosilicate Glass Glass Ceramic	Excellent	100	Universally inert.	Cole-Parmer Chemical Compatibility
Glass (borosilicate) Glass Ceramic	Excellent	100	Inert	Cole-Parmer Chemical Compatibility
316L Stainless Steel Metal	Excellent	80	Inert; preferred for high-purity solvent service.	Cole-Parmer Chemical Compatibility
Aluminium Metal	Good	40	Acceptable; avoid prolonged wet contact	Cole-Parmer Chemical Compatibility
Carbon Steel Metal	Fair	50	Trace moisture causes rust; flash-rust prevention required.	Cole-Parmer Chemical Compatibility
HDPE Thermoplastic	Fair	40	Swells with many polar solvents; verify per solvent.	Cole-Parmer Chemical Compatibility

MATERIAL	RATING	MAX T (°C)	NOTES	SOURCE
PP Thermoplastic	Good	50	Acceptable but watch swelling with esters	Cole-Parmer Chemical Compatibility
PVC Thermoplastic	Fair	25	Esters soften PVC; avoid for esters	Cole-Parmer Chemical Compatibility

Ratings reflect the service envelope (concentration × temperature) shown. Always confirm against your specific duty cycle and contact-time before equipment selection. The most cautious rating across overlapping references is shown.

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 HAZCOM 2012

SIGNAL WORD

Warning **Adjudicated**

H-CODES (HAZARD STATEMENTS)

H302, H373 **Adjudicated**

P-CODES (PRECAUTIONARY STATEMENTS)

P260, P264, P270, P314, P501 **Adjudicated**

OCCUPATIONAL EXPOSURE LIMITS

OSHA PEL (29 CFR 1910.1000)

— **no canonical**

ACGIH TLV

— **no canonical**

NIOSH REL

— **no canonical**

NIOSH IDLH

— **no canonical**

Transport descriptions reflect 49 CFR 172.101 lookup at time of publication. Sourced data: ECHA CLP Annex VI for harmonised classifications, 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
29323 7	anhydrous, 99.8%	99.8%	Clos e	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

Cool, well-ventilated flammable-liquid storage area. Tightly sealed original containers. Segregate from oxidizers and acids. Bond and ground bulk storage.

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

INCOMPATIBILITIES

Strong oxidizers, strong acids, isocyanates, anhydrides. Hygroscopic — protect from atmospheric moisture for water-sensitive end uses.

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

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.

HANDLING PRECAUTIONS

Use chemical-resistant gloves and splash goggles. Bond and ground during transfer to prevent static accumulation. Eliminate ignition sources within vapor envelope.

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

SHELF LIFE

Consult Technical Services for product-specific shelf life

SHIPPING DESCRIPTION (US DOT)

Not regulated for transport.

Confirm against shipping documents and carrier requirements before tender.

NMFC CLASS
55

REVISION HISTORY

Last reviewed 2026-07-17 by Andre Taki, DOT Hazmat Specialist.

VERSION	DATE	CHANGE	TRIGGER
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
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

VERSION	DATE	CHANGE	TRIGGER
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.