

TECHNICAL DATA SHEET

Ethylene Glycol ACS Grade

ACS Grade

CAS NUMBER	ALLIANCE CODE	GENERATED
107-21-1	ethylene-glycol-acs-grade	2026-09-01
REVISION	REVIEWED	
1.2	2026-07-17 · Andre Taki	

IDENTITY & COMPOSITION

PRODUCT NAME	ALLIANCE CODE
Ethylene Glycol ACS Grade	ethylene-glycol-acs-grade
GRADE	CONCENTRATION
ACS Grade	—
CAS NUMBER	FORMULA
107-21-1 PubChem	C2H6O2 PubChem
MOLECULAR WEIGHT	PRODUCT TYPE
62.07 PubChem	pure_substance

SPECIFICATIONS

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Assay	Min. 99.9%	99.96 %	—	Supplier specification
Acidity as Acetic Acid	Max 0.005%	0.0003 %	—	Supplier specification
Chloride (Cl)	0.5 ppm max	0.1 ppm	—	Supplier specification
Diethylene Glycol	Max 0.05%	0.02 %	—	Supplier specification

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Iron (Fe)	0.1 ppm max	0.02 ppm	—	Supplier specification
Residue after evaporation	Max 0.005%	0.0010%	—	Supplier specification
Water	0.05 wt % max	0.02 %	—	Supplier specification
Sulfate (SO ₄)	Max 5 ppm	0.5 ppm	Turbidimetric, ACS procedure	Interpreted
Heavy metals (as Pb)	Max 1 ppm	0.1 ppm	ICP-OES / ACS heavy metals procedure	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.

AVAILABLE GRADES SAME CAS, ALTERNATE GRADES AND CONCENTRATIONS

GRADE	CONCENTRATION	TYPICAL ASSAY	SKU
THIS GRADE ACS Grade	—	—	current
Technical	60/40	—	ethylene-glycol-60-40
Laboratory	50/50	—	ethylene-glycol-50-50
Technical	29.98%	—	ethylene-glycol-30-70

Typical assay shown is the rolling-window mean from the sibling product's most recent lots. Grade selection drives downstream end-use — verify the sibling grade matches your specification before substitution.

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
Color	10	Supplier specification
Odor	Odorless	Published reference
pH	5.5–7.5 50% aq. sol	Supplier specification
Specific Gravity (20 °C)	1.1136 – 1.1156	Supplier specification
Density	1.115 at 68 °F (USCG, 1999) – Denser than water; will sink	Published reference
Boiling Point	196 – 199 °C	Interpreted
Melting Point	9 °F (NTP, 1992)	Published reference
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

REGULATORY & TRANSPORT

DOT / 49 CFR

UN NUMBER

Not regulated **Adjudicated**

PACKING GROUP

Not regulated **Adjudicated**

HAZARD CLASS

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.

APPLICATIONS

Use as a laboratory reagent **laballey.com**

Recommended for use in industrial, commercial, and research institutes **laballey.com**

Anti-freezing agent **laballey.com**

Manufacturing of resins **laballey.com**

Synthesis of polyester fibers **laballey.com**

Dehydrating agent **laballey.com**

Automobile industry, 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, dry, well-ventilated area in tightly sealed original containers. Neat glycols are combustible liquids with high flash points (roughly 99–111 °C) and do not require a solvent store; aqueous blends will not sustain combustion. Protect inhibited coolants from contamination and from freezing below their stated protection point.

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

INCOMPATIBILITIES

Strong oxidizers, strong acids and strong bases. Galvanized (zinc) surfaces are attacked by many inhibited coolant packages. Verify elastomer and gasket compatibility for the service temperature; EPDM is standard for glycol/water service.

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

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.

SHELF LIFE

Consult Technical Services for product-specific shelf life

PACKAGING & LOGISTICS

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. • <code>unNumber</code> · canonical change (<code>coa.data_provenance / adjudication</code>) • <code>hazardClass</code> · canonical change (<code>coa.data_provenance / adjudication</code>) • <code>packingGroup</code> · canonical change (<code>coa.data_provenance / adjudication</code>) • <code>dotProperShippingName</code> · canonical change (<code>coa.data_provenance / adjudication</code>)	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). • <code>countryOfOrigin</code> · canonical adjudication / reground (<code>coa.data_provenance</code>) • <code>dotSubsidiaryHazardClass</code> · canonical adjudication / reground (<code>coa.data_provenance</code>) • <code>ghsClassification</code> · canonical adjudication / reground (<code>coa.data_provenance</code>) • <code>hazard_h_codes</code> · canonical adjudication / reground (<code>coa.data_provenance</code>) • <code>hazard_p_codes</code> · canonical adjudication / reground (<code>coa.data_provenance</code>) • <code>hsCode</code> · canonical adjudication / reground (<code>coa.data_provenance</code>) • <code>signalWord</code> · canonical adjudication / reground (<code>coa.data_provenance</code>)	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.