Technical Data Sheet

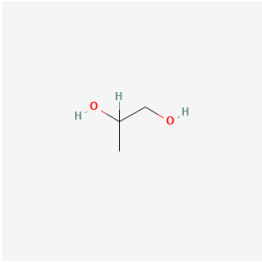
50% Propylene Glycol Technical Grade

Technical Grade · 50%

Alliance Code	Revised	Revision
50-propylene-glycol-technical-grade	2026-10-21	1.6

CAS number

57-55-6



Structure · PubChem

Grade

Technical Grade · 50%

IDENTITY & COMPOSITION

PRODUCT NAME

50% Propylene Glycol Technical Grade

ALLIANCE CODE

50-propylene-glycol-technical-grade

GRADE

Technical Grade

CONCENTRATION

50% v/v

CAS NUMBER

57-55-6 PubChem

FORMULA

C3H8O2 PubChem

MOLECULAR WEIGHT

76.09 PubChem

PRODUCT TYPE

Mixture

SPECIFICATIONS

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Assay	50.0 - 51.0 % v/v	—	—	Interpreted
Freeze point	-28.6 °F (-33.7 °C) max	—	ASTM D1177	Interpreted

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Dilution water quality (conductivity @ 25 °C)	Deionized water; ≤ 10 µS/cm	—	ASTM D1125	Interpreted
Dipropylene glycol (DPG)	0.25 wt% max	—	GC area % (ASTM E202)	Interpreted
Acidity as Acetic Acid	0.0025 % max	—	—	Interpreted
Chlorides as Cl	0.7 ppm max	—	—	Interpreted
Heavy Metals as Pb	2.5 ppm max	—	—	Interpreted
Iron	0.51 ppm max	—	—	Interpreted
ash	0.0025% max	—	—	Interpreted
Color, Pt-Co	10 APHA (maximum)	—	—	Interpreted
Appearance	Pass	—	—	Interpreted
Suspended Matter	Pass	—	—	Interpreted
Composition	50 % propylene glycol / 50 % deionized water, by volume	—	By formulation; batch weights (scale ticket)	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.

AVAILABLE GRADES SAME CAS, ALTERNATE GRADES AND CONCENTRATIONS

GRADE	CONCENTRATION	TYPICAL ASSAY	SKU
THIS GRADE Technical Grade	50%	—	current
—	50%	—	50-propylene-glycol-inhibited

Typical assay for each grade is the average of its recent lots. Confirm a grade meets your specification before substituting it.

PHYSICAL & CHEMICAL PROPERTIES

PROPERTY	VALUE	SOURCE
Appearance	Clear, colorless to pale liquid	Adjudicated
Odor	Mild, characteristic	Adjudicated
pH	Essentially neutral (unbuffered blend)	Adjudicated
Specific Gravity	1.040 at 20/20 °C (water = 1)	Adjudicated
Density	1.0384 g/cm^3 at 20 °C	Adjudicated
Boiling Point	~106 °C	Adjudicated
Melting Point	-34 °C (freeze / crystallization onset)	Adjudicated
Flash Point	Not flammable (aqueous solution)	Adjudicated
Solubility (water)	Miscible with water	Adjudicated

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
Not regulated **Adjudicated**

H-CODES (HAZARD STATEMENTS)
Not applicable **ECHA C&L Inventory**

P-CODES (PRECAUTIONARY STATEMENTS)
Not applicable **ECHA C&L Inventory**

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: NIOSH Pocket Guide for REL/IDLH, OSHA Z-Tables for PEL. Always verify against the latest regulatory text before shipment-critical decisions.

APPLICATIONS

Ready-to-use propylene glycol and water blend (50% PG): heat-transfer fluid and antifreeze for closed-loop systems; humectant and solvent carrier.

Adjudicated

STORAGE & HANDLING

RECOMMENDED STORAGE
Keep tightly closed (hygroscopic) in a cool, dry place away from oxidizers. Stainless steel, carbon steel, polyethylene or polypropylene containers.

Adjudicated

HANDLING PRECAUTIONS
Chemical-resistant gloves and splash goggles. 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; strong bases.

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.
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Confirm against shipping documents and carrier requirements before tender.

NMFC CLASS
55

REVISION HISTORY

Last reviewed 2026-10-20 by Andre Taki, Chief Commercial Officer, DOT Hazmat–certified (49 CFR 172.704).

VERSION	DATE	CHANGE	TRIGGER
1.6	2026-10-21	Canonical data updated: 1 field changed via the provenance/adjudication pipeline. • `physicalProperties` · canonical change (coa.data_provenance / adjudication)	`canonical_change`
1.5	2026-10-20	Canonical data updated: 2 fields changed via the provenance/adjudication pipeline. • `density` · canonical change (coa.data_provenance / adjudication) • `specificGravity` · canonical change (coa.data_provenance / adjudication)	`canonical_change`
1.4	2026-10-13	Canonical data updated: 5 fields changed via the provenance/adjudication pipeline. • `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) • `storage_precautions` · canonical change (coa.data_provenance / adjudication) • `recommended_use` · canonical change (coa.data_provenance / adjudication)	`canonical_change`
1.3	2026-09-09	Canonical data updated: 1 field changed via the provenance/adjudication pipeline. • `physicalProperties` · canonical change (coa.data_provenance / adjudication)	`canonical_change`

VERSION	DATE	CHANGE	TRIGGER
1.2	2026-07-24	Canonical data updated: 1 field changed via the provenance/adjudication pipeline. • physicalProperties · canonical change (coa.data_provenance / adjudication)	canonical_change
1.1	2026-07-16	Canonical data re-verified: 4 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) • hsCode · canonical adjudication / reground (coa.data_provenance) • physicalProperties · 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.