Technical Data Sheet

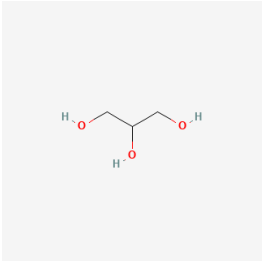
Glycerin 25% Food Grade

Food · 25% w/w

Alliance Code	Revised	Revision
glycerin-25-food-grade	2026-10-20	1.4

CAS number

56-81-5



Structure · PubChem

Grade

Food · 25% w/w

IDENTITY & COMPOSITION

PRODUCT NAME

Glycerin 25% Food Grade

ALLIANCE CODE

glycerin-25-food-grade

GRADE

Food

CONCENTRATION

25% w/w

CAS NUMBER

56-81-5 PubChem

FORMULA

C3H8O3 PubChem

MOLECULAR WEIGHT

92.09 PubChem

PRODUCT TYPE

Solution

SPECIFICATIONS

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Assay (glycerol)	24.0 - 26.0 % w/w	—	—	Interpreted
Fatty acids and esters	not more than 0.25 mL of 0.5 N sodium hydroxide consumed	—	USP saponification / residual titration on a 50 g sample	Interpreted
Heavy metals	1.25 ppm max	—	—	Interpreted

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Lead	0.26 ppm max	—	—	Interpreted
Related compounds (total impurities, including diethylene glycol)	0.25% max	—	USP gas chromatography, area normalization	Interpreted
Related compounds	0.025 % max	—	—	Interpreted
Chloride	0.00028% max	—	—	Interpreted
Chlorinated Compounds	0.00075% max	—	Morpholine reflux followed by silver-nitrate turbidity comparison	Interpreted
Diethylene Glycol	0.025% max	—	Gas chromatography with flame-ionization detection	Interpreted
Ethylene glycol	0.025 % max	—	USP 41 (Identification Test B, gas chromatography)	Interpreted
Individual Impurities, excluding Diethylene Glycol	0.025% max	—	Gas chromatography with flame-ionization detection	Interpreted
Related compounds (any individual impurity other than diethylene glycol)	0.025% max	—	USP gas chromatography, area normalization	Interpreted
Residue on Ignition	0.0027% max	—	Ignition of a 50 g sample followed by sulfuric-acid treatment and ignition to constant weight	Interpreted
Sulfate	0.00057 % max	—	USP <221>	Interpreted

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Total Impurities, including Diethylene Glycol	0.25% max	—	Gas chromatography with flame-ionization detection	Interpreted
Color (APHA)	10 Max APHA	—	AMT-FGQ-G10	Interpreted
Composition	25 % glycerol in deionized water, by weight	—	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 Food	25% w/w	—	`current`
Food	75% w/w	—	`glycerin-75-food-grade`
Food	50% w/w	—	`glycerin-50-food-grade`
Technical Grade	—	—	`glycerin-technical-grade`
USP Grade	—	—	`glycerin-usp-grade`

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, slightly viscous liquid	Adjudicated
Specific Gravity	1.062 at 20/20 °C (water = 1)	Adjudicated
Density	1.0598 g/cm^3 at 20 °C	Adjudicated
Boiling Point	100 °C (212 °F) (aqueous solution)	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)

15 mg/m^3 TWA total / 5 mg/m^3 TWA respirable

OSHA 29 CFR 1910.1000

ACGIH TLV

— **no canonical**

NIOSH REL

5 mg/m^3 TWA (mist) **NIOSH Pocket Guide**

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.

APPLICATION GUIDANCE

Glycerin 25% Food Grade (Food) application guidance is available on request. Contact Alliance Chemical Technical Services for grade-specific use recommendations.

STORAGE & HANDLING

RECOMMENDED STORAGE

Keep closed in a cool place away from strong oxidizers. Stainless steel, aluminum or polyethylene containers.

Adjudicated

HANDLING PRECAUTIONS

Use standard chemical PPE — splash goggles, gloves, lab coat. Refer to SDS for hazard-specific PPE requirements.

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

INCOMPATIBILITIES

Strong oxidizing agents (violent reaction with potassium permanganate, chromium trioxide and similar); 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)

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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
1.4	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
1.3	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
1.2	2026-09-30	Canonical data updated: 2 fields changed via the provenance/adjudication pipeline. • boilingPoint · canonical change (coa.data_provenance / adjudication) • appearance · canonical change (coa.data_provenance / adjudication)	canonical_change
1.1	2026-06-17	Canonical data re-verified: 3 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)	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.