

PRODUCT IDENTIFICATION



Product Name: Propylene Glycol Technical Grade

CAS Number: 57-55-6

Molecular Formula: $C_3H_8O_2$

Molecular Weight: 76.09 g/mol

Grade: Technical Grade

Purity / Concentration: 100%

Synonyms: 1,2-Propanediol, Propylene Glycol

PRODUCT OVERVIEW

Propylene Glycol Technical Grade is a clear, colorless, and viscous liquid known for its high purity levels, including a 99.95% assay by GC. This versatile chemical serves as a reliable solvent and moisture-retaining agent across a variety of industrial and laboratory applications.

Grade Significance: Technical Grade ensures that the chemical meets consistent industrial standards for purity and performance, making it an ideal choice for manufacturing and general laboratory processes where high-grade reliability is required.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay Gc	%	99.95	99.9	—	GC
Color (APHA)	APHA	2	—	10	APHA
Refractive Index 20C	—	1.4328	1.431	1.433	Refractometer @ 20°C
Specific Gravity (20°C)	g/mL	1.0361	1.0311	1.0411	Hydrometer @ 20°C
Water Karl Fischer	%	0.011	—	0.2	Karl Fischer
Iron (Fe)	ppm	0.06	—	0.5	ICP-MS
Chlorides As Cl	ppm	≤ 0.5 ppm	—	—	ICP
Sulfate (SO_4^{2-})	ppm	≤ 60 ppm	—	—	ICP

ND = Not Detected. Values are typical and may vary by lot.

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Clear, slightly viscous colorless liquid	Odor	Slightly sweet odor
Form	Liquid	Boiling Point	370.8 °F at 760 mmHg (NTP, 1992)
Melting / Freezing Point	-76 °F (NTP, 1992)	Flash Point	210 °F (NTP, 1992)
Solubility	Highly water-soluble, miscible with organic solvents	Molecular Formula	$C_3H_8O_2$
Molecular Weight	76.09 g/mol	Vapor Pressure (20°C)	0.12 mmHg
Viscosity (25°C)	59 cP	Refractive Index (20°C)	1.431
Density (25°C)	1.036 g/mL		

APPLICATIONS

1. **Laboratory Research** — Functions as a critical mobile phase component in reversed-phase chromatography to assist in the precise separation of organic compounds.
2. **Food Production** — Acts as an effective moisture-retaining agent to improve texture and extend the shelf life of various food products.
3. **Pharmaceuticals** — Serves as a stable solvent in drug formulations, ensuring active ingredients remain properly dissolved and effective.
4. **Automotive and Industrial** — Utilized as a high-performance antifreeze agent in cooling systems due to its low freezing point and reliable thermal properties.

STORAGE & HANDLING

Propylene Glycol should be stored in a cool, dry, and well-ventilated area to maintain its chemical integrity and prevent contamination. Although it is not classified as a hazardous substance, keeping containers tightly sealed prevents moisture absorption and ensures the product remains within its strict purity specifications.

- Store in a cool, dry place away from direct sunlight.
- Use materials compatible with propylene glycol, such as HDPE or glass containers.
- Avoid contact with strong oxidizing agents and acids.
- Ensure proper ventilation when handling to minimize inhalation exposure.
- Use personal protective equipment (PPE) such as gloves and goggles as necessary.

AVAILABLE PACKAGING

- 1 Quart
- 1 Gallon
- 5 Gallon
- 15 Gallon
- 55 Gallon
- 275 Gallon
- 330 Gallon

SAFETY SUMMARY (CROSS-REFERENCE TO SDS)

Signal Word: Warning

No GHS pictograms assigned.

Hazard Statements:

- Not Classified
- Reported as not meeting GHS hazard criteria by 6762 of 6899 companies (only 2% companies provided GHS information). For more detailed information, please visit ECHA C&L website.

Emergency Contact: CHEMTEL - 800-255-3924 (24 Hours/Day, 7 Days/Week)

For complete safety information, refer to the Safety Data Sheet (SDS) for this product.

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