

PRODUCT IDENTIFICATION



Product Name: Propylene Glycol 40% – Technical Grade

CAS Number: 57-55-6

Molecular Formula: C₃H₈O₂

Molecular Weight: 76.09 g/mol

Grade: Technical Grade

Purity / Concentration: 40%

Synonyms: Propylene Glycol Solution, Propylene Glycol 40%

PRODUCT OVERVIEW

Propylene Glycol 40% Technical Grade is a clear, colorless, and versatile solvent solution formulated for consistent performance across industrial applications. With a controlled specific gravity of 1.0381 g/mL and extremely low impurity levels, including heavy metals below 2 ppm, it serves as a reliable base for various chemical formulations.

Grade Significance: Technical Grade indicates that this product is manufactured for industrial and commercial use where high-quality standards are required, though it is not intended for direct food or pharmaceutical consumption without further processing.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay Gc	%	40	39.5	40.5	GC
Color (APHA)	APHA	3	—	10	APHA
Color Lovibond	Y/R	3	—	10	AOCS Cc 13e-92
pH	—	7	6	8	pH Meter
Specific Gravity (20°C)	g/mL	1.0381	1.0331	1.0431	Hydrometer @ 20°C
Heavy Metals As Pb	ppm	≤ 2 ppm	—	—	ICP-MS
Iron (Fe)	ppm	≤ 0.2 ppm	—	—	ICP-MS
Chlorides As Cl	ppm	≤ 0.2 ppm	—	—	ICP
Acidity As Acetic	%	≤ 0.001 %	—	—	Titration

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

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Clear, colorless liquid	Odor	Slightly sweet odor
Boiling Point	188°C (371°F)	Melting / Freezing Point	-59°C (-74°F)
Flash Point	104°C (219°F)	Specific Gravity	1.033 (20 °C)
Solubility	Miscible with water and many organic solvents	Molecular Formula	C ₃ H ₈ O ₂
Molecular Weight	76.09 g/mol	Vapor Pressure (20°C)	0.1 mmHg
Viscosity (25°C)	50 cP	Refractive Index (20°C)	1.431
Density (25°C)	1.036 g/mL		

APPLICATIONS

1. **Food Processing** — Functions as a moisture-retaining agent to maintain product texture and extend shelf life in various food items.
2. **Chemical Manufacturing** — Acts as a high-quality solvent for dissolving and stabilizing various chemical ingredients in complex formulations.
3. **HVAC and Automotive** — Used in antifreeze and heat transfer fluid formulations to effectively lower the freezing point of aqueous systems.
4. **Pharmaceuticals** — Serves as a carrier or excipient to ensure the uniform delivery of active pharmaceutical ingredients.

STORAGE & HANDLING

Proper storage is essential to maintain the purity and integrity of this 40% propylene glycol solution by preventing contamination from moisture or environmental impurities. While it is not classified as a hazardous substance, it should be kept in a cool, dry, and well-ventilated area to ensure long-term stability and performance.

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

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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