

### PRODUCT IDENTIFICATION



**Product Name:** Propylene Glycol 40% – USP Grade (C<sub>3</sub>H<sub>8</sub>O<sub>2</sub>)  
**CAS Number:** 57-55-6  
**Molecular Formula:** C<sub>3</sub>H<sub>8</sub>O<sub>2</sub>  
**Molecular Weight:** 76.09 g/mol  
**Grade:** USP Grade  
**Purity / Concentration:** 40%  
**Synonyms:** Propylene Glycol Solution, 1,2-Propanediol 40%

### PRODUCT OVERVIEW

Propylene Glycol 40% USP Grade is a high-purity, aqueous solution designed for consistent performance in sensitive formulations. Featuring an assay of 40.1% and minimal impurity levels, such as chloride and sulfate concentrations at 1 ppm, this product serves as a reliable solvent and moisture-retaining agent across various technical and life science applications.

**Grade Significance:** The USP Grade designation confirms that this product meets the rigorous standards set by the United States Pharmacopeia, ensuring it is safe and pure enough for pharmaceutical and food-grade applications.

### CERTIFICATE OF ANALYSIS — TYPICAL VALUES

*Certificate of Analysis data not available for this product.*

### PHYSICAL & CHEMICAL PROPERTIES

|                                 |                                              |                         |                                                     |
|---------------------------------|----------------------------------------------|-------------------------|-----------------------------------------------------|
| <b>Appearance</b>               | Clear, colorless, slightly viscous liquid    | <b>Odor</b>             | Slightly sweet odor                                 |
| <b>Form</b>                     | Liquid                                       | <b>Boiling Point</b>    | Not characterized for the 40% solution              |
| <b>Melting / Freezing Point</b> | Not characterized for the 40% solution       | <b>Flash Point</b>      | 210 °F (NTP, 1992)                                  |
| <b>Specific Gravity</b>         | 1.033                                        | <b>Solubility</b>       | Fully miscible with water and many organic solvents |
| <b>Molecular Formula</b>        | C <sub>3</sub> H <sub>8</sub> O <sub>2</sub> | <b>Molecular Weight</b> | 76.09 g/mol                                         |
| <b>Vapor Pressure (20°C)</b>    | 0.1 mmHg                                     | <b>Viscosity (25°C)</b> | 40 cP                                               |
| <b>Refractive Index (20°C)</b>  | 1.431                                        | <b>Density (25°C)</b>   | 1.036 g/mL                                          |

### APPLICATIONS

- Pharmaceutical** — Functions as a stable solvent and carrier for active pharmaceutical ingredients to ensure proper drug delivery and formulation consistency.
- Analytical Chemistry** — Used as a high-quality mobile phase component in reversed-phase chromatography to facilitate the precise separation of organic compounds.
- Food & Beverage** — Acts as an effective humectant that retains moisture in food products to improve texture and extend overall shelf life.
- Cosmetics & Personal Care** — Incorporated into skin care formulations for its excellent moisturizing properties and its ability to act as a solvent for other active ingredients.

## STORAGE & HANDLING

Proper storage in a cool, dry, and well-ventilated area is essential to maintain the integrity of the 40% concentration and prevent contamination. While this aqueous solution is not classified as flammable, maintaining stable storage conditions ensures the product remains free of degradation and meets 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.
- Ensure proper ventilation when handling to minimize inhalation exposure.
- Use appropriate personal protective equipment (PPE) such as gloves and safety 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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