

### PRODUCT IDENTIFICATION



**Product Name:** Propylene Glycol 40% – Technical Grade

**CAS Number:** 57-55-6

**Molecular Formula:**  $C_3H_8O_2$

**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 versatile, clear, and colorless aqueous solution featuring a precise 40% concentration. With a controlled pH of 7 and high purity levels, including iron levels below 0.2 ppm, this product serves as a reliable solvent and moisture stabilizer across various industrial processes.

**Grade Significance:** Technical Grade indicates that this product is manufactured for industrial and manufacturing applications where consistent, reliable performance is required, though it is not intended for direct human consumption.

### 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

|                         |                                               |                                 |                                              |
|-------------------------|-----------------------------------------------|---------------------------------|----------------------------------------------|
| <b>Appearance</b>       | Clear, colorless liquid                       | <b>Odor</b>                     | Slightly sweet odor                          |
| <b>Boiling Point</b>    | ~104 °C                                       | <b>Melting / Freezing Point</b> | -22 °C (freeze / crystallization onset)      |
| <b>Flash Point</b>      | Not flammable (aqueous solution)              | <b>Specific Gravity</b>         | 1.039                                        |
| <b>Solubility</b>       | 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> | 50 cP                                         | <b>Refractive Index (20°C)</b>  | 1.431                                        |
| <b>Density (25°C)</b>   | 1.036 g/mL                                    |                                 |                                              |

## APPLICATIONS

- Food and Beverage** — Functions as a humectant to retain moisture in food products, significantly enhancing texture and overall shelf life.
- Chemical Manufacturing** — Acts as a stable solvent for various chemical processes, ensuring consistent performance in complex formulations.
- Automotive and Industrial** — Utilized in antifreeze formulations to effectively lower the freezing point of liquids in cooling systems.
- Pharmaceuticals** — Serves as an effective carrier or vehicle for active pharmaceutical ingredients to ensure proper delivery in various formulations.

## STORAGE & HANDLING

Proper storage in a cool, dry, and well-ventilated area is essential to maintain the concentration integrity of the aqueous solution. Although the product is not classified as flammable, keeping containers tightly sealed prevents contamination and ensures the chemical remains stable for its intended industrial use.

- 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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