

### PRODUCT IDENTIFICATION



**Product Name:** 40% Propylene Glycol Inhibited

**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 Inhibited Solution, Inhibited Propylene Glycol

### PRODUCT OVERVIEW

Alliance Chemical offers 40% Inhibited Propylene Glycol, a high-quality technical grade solution engineered for superior thermal transfer and stability. With a low impurity profile, including an APHA color of 3 and iron content below 0.2 ppm, this clear, colorless liquid provides consistent performance in demanding heating and cooling applications.

**Grade Significance:** Technical grade signifies that this product is manufactured to meet industrial performance standards, offering an optimal balance of purity and cost-effectiveness for non-pharmaceutical applications.

### 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              |
| 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       | ppm  | 3         | 0      | 10     | 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> | -21 °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 ethanol  | <b>Molecular Formula</b>        | $C_3H_8O_2$                             |
| <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                       | <b>Decomposition Temp.</b>      | > 150°C                                 |

## APPLICATIONS

1. **HVAC** — Used as a reliable heat transfer fluid in hydronic heating and cooling systems to ensure efficient thermal regulation.
2. **Automotive** — Functions as a non-toxic antifreeze and coolant additive, protecting engine components from freezing and corrosion.
3. **Paints and Coatings** — Acts as a stable solvent and coalescing agent, helping to maintain the consistency and application properties of various coatings.
4. **Food Processing** — Serves as an effective humectant, helping to retain moisture and maintain the texture of food products.

## STORAGE & HANDLING

Proper storage in a cool, dry, and well-ventilated area is essential to maintain the chemical integrity and inhibitor effectiveness of the solution. While the product is not classified as flammable, keeping containers tightly sealed prevents contamination and ensures the long-term stability of the 40% concentration.

- 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.
- Wear 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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