

## Technical Data Sheet (TDS)

Issue Date: 10 FEB 2026 Version: V1.0

### 1. Product Overview

- **Product Name:** Propylene Glycol Monomethyl Ether (PGME)
- **CAS Number:** 107-98-2
- **Molecular Formula:** C<sub>4</sub>H<sub>10</sub> O<sub>2</sub>
- **Molecular Weight:** 76.12 g/mol
- **Chemical Source:** Synthetic industrial organic solvent (produced by the reaction of propylene oxide and methanol under catalytic conditions; purified by distillation and precision filtration to achieve high purity ≥99.5%; low water content and impurity content, meeting industrial/cosmetic/electronic grade requirements).
- **Product Trait:** Colorless transparent liquid with mild ether-like odor; combustible liquid, fully miscible with water and most organic solvents; low volatility, good solvency for resins, polymers and organic compounds; stable under normal storage and processing conditions, non-corrosive to most metals and plastics; meets industrial solvent environmental and safety standards.
- **Core Properties:** **High-performance multifunctional industrial solvent** with excellent solvency, good water miscibility, low volatility and moderate evaporation rate; compatible with acrylic, epoxy, polyurethane and alkyd resins; suitable for various industrial formulations and cleaning processes; fully biodegradable, low environmental impact; high purity (≥99.5%) with low heavy metal and impurity content.
- **Main Application:** Industrial solvent for coatings, inks and adhesives; electronic precision cleaning agent; chemical intermediate for surfactant and plasticizer production; cosmetic raw material (solvent and humectant); textile printing and dyeing auxiliaries; water-based coating coalescing agent.

### 2. Technical Specifications (Industrial Grade, Complies with GB/T/ACGIH Standards)

Item	Specification
Appearance	Colorless transparent liquid
Assay (PGME)	≥ 99.5%
Water Content	≤ 0.1%
Density (25°C)	0.920-0.925 g/cm <sup>3</sup>
Refractive Index (20°C)	1.402-1.404
Boiling Range (760mmHg)	120-122°C
Flash Point (Closed Cup)	39°C
Acidity (as CH <sub>3</sub> COOH)	≤ 0.005%
Evaporation Residue	≤ 0.005%
Heavy Metals (Pb)	≤ 2 ppm
Heavy Metals (As)	≤ 1 ppm
pH Value (25°C)	6.0-7.0
Viscosity (25°C)	1.7 mPa·s
Solubility	Fully miscible with water and most organic solvents
Autoignition Temperature	374°C

### 3. Product Advantages

1. **Excellent Solvency:** Strong dissolving power for acrylic, epoxy, polyurethane, alkyd and polyester resins; suitable for various coating, ink and adhesive formulations, improving product film-forming property and gloss.
2. **Good Water Miscibility:** Fully miscible with water in any proportion; ideal for water-based coating/ink formulations as a coalescing agent and cosolvent, no phase separation.
3. **Low Volatility & Moderate Evaporation:** Low vapor pressure and moderate evaporation rate; reduces solvent loss and VOC emission during processing; avoids pinholes and orange peel on coating/ink film surface.



# NEWAY SINOPHC TECH. LIMITED

ADD:RM. 204, BUILDING 3, NO. 188, AONA RD., CHINA (SHANGHAI) PILOT FREE TRADE ZONE.  
Email:marketing01@newayphc.com; Phone:+86-021-50350029 <https://www.newayphc.com>

- High Purity & Stability:** Purity  $\geq 99.5\%$ , low water content and impurity content; stable under normal storage/processing conditions; no corrosive effect on steel, aluminum and HDPE/PP plastics.
- Environmentally Friendly:** Fully biodegradable ( $BOD_5 / COD = 0.75$ ); low aquatic toxicity and no bioaccumulation; meets EU SED and US EPA VOC emission standards, low environmental impact.
- Multifunctional Application:** Can be used as solvent, coalescing agent, cleaning agent and chemical intermediate; one product for multiple industrial uses, reducing production cost.

## 4. Application Fields

### 4.1 Coatings & Inks Industry

- Water-based/ solvent-based architectural coatings, industrial coatings and wood coatings (coalescing agent and cosolvent); offset printing, gravure printing and flexographic printing inks (solvent and diluent); improves film-forming property, adhesion and gloss of coatings/inks.

### 4.2 Adhesives & Sealants

- Solvent-based and water-based adhesives (epoxy, acrylic, polyurethane); sealants and caulks; acts as a solvent to adjust viscosity and improve bonding strength.

### 4.3 Electronic Industry

- Electronic precision cleaning agent for PCB/FPC boards, semiconductor wafers and electronic components; removes flux and organic contaminants without damaging electronic materials.

### 4.4 Cosmetics & Daily Chemicals

- Cosmetic raw material (toner, lotion, hair care products) as solvent and humectant; industrial cleaning agent for daily chemical product production.

### 4.5 Other Industrial Fields

- Chemical intermediate for surfactant, plasticizer and pesticide production; textile printing and dyeing auxiliaries (solvent and leveling agent); leather processing agent (degreasing and cleaning).

## 5. Usage & Formulation Guidelines

### 5.1 Recommended Dosage (Industrial Formulation)

Application Field	Dosage (w/w)
Water-based Coatings (coalescing agent)	3-8%
Solvent-based Inks (solvent/diluent)	10-30%
Electronic Cleaning Agent (pure/ diluted)	50-100%
Cosmetics (solvent/humectant)	1-5%
Adhesives (viscosity adjuster)	5-15%

## 6. Packaging & Storage

### 6.1 Packaging Specifications (Industrial Grade, Anti-Leakage & Anti-Static)

- 500 mL Amber glass bottle (laboratory/R&D/small-batch use, light protection + anti-static)
- 5 L HDPE plastic drum (medium-batch production use, anti-leakage + anti-static)
- 25 L HDPE plastic drum (bulk production use, anti-leakage + anti-static + explosion-proof)
- 1000 L IBC tote (large-scale industrial use, anti-static valve + dust-free port)
- Custom packaging (1 L/2 L) available for R&D and small-batch formulation needs (all **anti-leakage + anti-static**).

## 7. Safety & Protection

- The product is a Class 3 flammable liquid with mild skin/eye/respiratory irritation; **all operations must be conducted by trained professional personnel** with full specified PPE (half-face organic vapor respirator, chemical-resistant safety goggles, nitrile rubber gloves  $\geq 0.20\text{mm}$ , flame-retardant lab coat, anti-static shoes).
- Operate in a well-ventilated fume hood with local exhaust ventilation; eliminate all ignition sources and prevent static electricity; avoid generating vapor or mist; do not inhale vapor or contact with skin/eyes for a long time; no eating/drinking/smoking in the work area.