

### Technical Data Sheet

Texol™ Propylene Glycol ( USP Grade )  
Monopropylene Glycol / MPG

#### Product Description

MPG is the US Pharmacopoeia compliant grade of monopropylene glycol. It is a clear. Colourless and practically odourless, hygroscopic liquid, completely soluble in water.

**Propylene Glycol :**  
HO-CH2-CH2(OH)-CH3

**CAS Registry Number :**  
57 – 55 – 6

MPG is miscible in all proportions with low molecular weight aliphatic alcohols and ketones. It is slightly to moderately soluble in aromatic hydrocarbon solvents and only slightly miscible with aliphatic hydrocarbon solvents.

MPG is generally recognized as safe (GRAS) by the U.S. Food and Drug Administration (FDA) in 21 CFR 184.1666, for use as a direct food additive under the conditions prescribed. It is approved by U.S FDA for certain indirect food additives uses. MPG is used in cosmetics and as an excipient ( inert solvent or carrier ) in pharmaceuticals. MPG has a wide range of practical applications such as antifreezes, coolants and aircraft deicing fluids; heat transfer and hydraulic; solvents; food; flavors and fragrances; cosmetics and personal care products; pharmaceuticals; chemicals intermediates; plasticizers; and thermoset plastic formulations.

#### Applications and Uses

MPG ( USP Grade ) is used in a wide range of applications in the pharmaceutical industry, the food industry, tobacco industry and in cosmetics.

Texol markets two grades of MPG to meet the requirements of the various applications.

- USP Grade:
  - ✓ Solvent in the flavor concentrate and fragrance industry, an excipient in elixirs and pharmaceuticals, and a coupling agent in sunscreens,shampoos, shaving creams and other personal care products
  - ✓ Wetting agent for natural gums to simplify compounding
  - ✓ Humectant, preservative and stabilizer in diverse applications like baked goods, flavorings, salad dressings, shave creams, pet food ( except cat food )
  
- Industrial Grade:
  - ✓ Raw material to produce high-performance unsaturated polyester resins (UPR) used for marine construction, gel coats, sheet molding compounds and synthetic marble castings
  - ✓ Chemical intermediate in the production of resins for paints and varnishes
  - ✓ Solutions with water to make antifreeze, heat-transfer fluids and aircraft and runway deicing fluids

# TEXOL

## Chemical

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#### Typical Properties

Property (Unit)	Typical Value	
Appearance	Clear	USP
Purity, wt. % min.	99.5	USP
Water, wt. % max.	0.2	USP
Color ( APHA ) max.	10	ASTM E202
Acidity [ as acetic acid ], wt. % max.	0.005	USP
Chlorides ( as Cl ), ppm max. mg/kg	1	USP
Iron, ppm max. mg/kg	0.5	ASTM E202
Cubic Expansion Coefficient at 20°C	6.96	
Water solubility at 25°C	Miscible in all proportions	
Molecular weight	76.09	
Boiling point at 760 mm Hg, °C	187.2	
Freezing point, °C	-58.9	
Flash point ( PMCC ), °C	99	
Density at 20/20 °C	1.036	
Specific heat at 20 °C, kJ/kg/°C	2.48	
Absolute viscosity at 20 °C, mPa.s	55	
Refractive index at 20 °C	1.4316	
Autoignition Temperature °C	421	
Electrical Conductivity at 20°C μS/m	4.4	
Dielectric Constant at 20°C	32.1	

#### Technical Expertise

Texol experts on MPG are regionally located to respond to your needs. Whether you have a question about products, applications or regulations, Texol offers comprehensive customer and technical service.

#### Product Stewardship

Texol encourages its customers and potential users to review their applications from the standpoint of human health and environmental aspects. To help ensure that Texol products are not used in ways for which they are not intended or tested, Texol personnel will assist customers in dealing with environmental and product safety considerations. Texol literature, including Material Safety Data Sheets (MSDS), should be consulted prior to the use. MSDS are updated regularly, therefore, please request and review the most current MSDS before handling or using any product. MSDS are available from the nearest Texol sales office.