# **MPG-USP**

Chemical Formula: C<sub>3</sub>H<sub>8</sub>O<sub>2</sub>

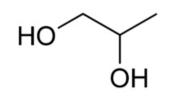
**CAS Registry Number: 57-55-6** 

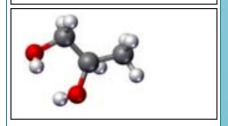
Molecular Weight: 76.09

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## **PRODUCT INFORMATION**





#### Synonyms:

- (.+-.)-1,2-Propanediol
- (.+-.)-Propylene glycol
- (RS)-1,2-Propanediol
- 1,2-(RS)-Propanediol
- 1,2-DIHYDROXYPROPANE
- 1,2-PROPANDIOL
- 1,2-Propanediol
- 1,2-Propylene glycol
- 1,2-PROPYLENEGLYCOL
- 1000PG
- 2,3-Propanediol
- 2: PN: US20050147610 SEQID: 2 claimed protein
- 2-Hydroxypropanol
- Adeka PG
- Adeka Propylene Glycol PG-P
- DL-1,2-Propanediol
- dl-Propylene glycol
- Dowfrost
- Immunoglobulin G1, anti-(human interleukin 18 (human heavy chain constant domain)
- Isopropylene glycol
- Methyl ethylene glycol
- Methylethyl glycol
- Methylethylene glycol
- MONO PROPYLENE GLYCOL
- Monopropylene glycol
- NSC 69860
- PG 12
- PG-T
- PG-T (glycol)
- POLYESTER OF 1,2-PROPANEDIOL

### Description

MPG – USP is the US Pharmacopoeia compliant grade of monopropylene glycol (MPG). It is a clear, colourless and practically odourless, hygroscopic liquid, completely soluble in water. MPG – USP is miscible in all proportions with low molecular weight aliphatic alcohols and ketones. It is slightly to moderately soluble in aromatics hydrocarbon solvents and only slightly miscible with aliphatics hydrocarbon solvents.

Typical properties				
Property	Test Method	Unit	Value	
Purity by GC	ASTM E-202	% (m/m)	99.5 min	
Dipropylene glycol		% (m/m)	0.1 max	
Colour	ASTM D1209	Pt-Co	5 max	
Water	ASTM E-202; E-203	% (m/m)	0.2 max	
Acidity as Acetic Acid	ASTM E-202; D-1613	% (m/m)	0.005 max	
Chlorides	USP	ppm	1.0 max	
Sulphate	USP	% (m/m)	0.006 max	
Iron	ASTM E-202	PPM	1.0 max	
Heavy metals as Pb	USP	ppm	5.0 max	

Typical properties of the pure product				
Property	Test Method	Unit	Value	
Molecular weight			76.094	
Density		Kg/m³	1036	
Coefficient of cubic expansion		10-4/°C	6.95	
Refractive index			1.4326	
Pour point		ōС	-59.5	
Boiling point		ōС	187.4	
Flash point		ōС	103	
Vapour pressure at 20°C		kPa	0.0067	
Vapour pressure at 50 ºC		kPa	0.0893	
Dynamic viscosity		mPa.s	55	
Surface tension at 25°C		mN/m	38	
Specific heat		kJ/kg K	2.48	
Latent heat of evaporation		kJ/kg	976.5	
Thermal conductivity		W/m K	0.187	
Heat of combustion at 25°C		kJ/kg	23982	
Electrical conductivity		μS/m	4.4	
Dielectric constant			32.0	

All typical physical properties are at 20°C unless stated otherwise.

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<sup>\*</sup> The above typical physical properties are published here as a guide to potential users of the product A sales specification is published separately



### **Application**

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

### **Test Methods**

ASTM standards are published by the American Society for Testing and Materials at www.astm.org. USP standards are published by the U.S. Pharmacopoeia Inc. at www.usp.org.

#### **Hazard Identification**

Low order of acute toxicity by the oral or precutaneous routes. Slightly irritating to the eyes and skin. This product is not in the 'flammable' range, but will burn.

Before handling the product refer to the Safety Data Sheet.

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