# Monopropylene Glycol (KEMPG)

Pharmaceutical grade



**Technical Data Sheet** 



## **Propylene Glycol (KEMPG)**

Chemical Name: Propylene Glycol

**Trade Name:** MPG/Pharmaceutical grade

#### Introduction:

Propylene Glycol (MPG), known also by the systematic name propane-1,2-diol, is an organic compound (a diol alcohol) that is usually a tasteless, odorless and colorless clear oily liquid. It is hygroscopic and miscible with water, acetone and chloroform.

#### **General Applications:**

MPG is widely used as ingredient in a diverse range of cosmetics and personal care products. It provides outstanding functionality as a solvent, coupling agent, carrier, emulsion stabilizer, dispersant, softening agent, viscosity modifier and humectants. It is also used in oral care (mouth washers, toothpastes), skin care (creams, lotions and oils), deodorants and anti-perspirants (roll & stick), hair care (shampoo, conditioner and styler, coloring items), shaving (creams, foams, gels, after shaves), bath and shower soaps, gels and moisturizers, body care (wipers, antiseptics), cleaners and disinfectants.

MPG is an effective humectant, preservative and stabilizer, and may be used in such diverse applications as bakery goods, food flavorings, salad dressings and semi-moist pet food.

#### **Cosmetic & Personal Care**

A main ingredient in many cosmetic products, MPG serves as a moisturizer, emulsifier, fragrance carrier and humectant, due to its ability to attract and hold water. Some of the daily-use products include:

- Baby wipes
- Bubble baths and shower products



- Deodorants and antiperspirants
- Shampoos, styling gels and hair dyes
- Shaving products
- Face creams
- Hand sanitizers, antibacterial lotions, and saline solutions
- Dental care (mouth washes and toothpastes)
- Perfumes and colognes
- Color cosmetics (blushes, eyeliner, lipsticks, eye shadow)

MPG is also used as an enzyme stabilizer, diluent and solvent in leading liquid detergent formulations.

## **Food Ingredients**

MPG has a variety of uses as it relates to food ingredients and food manufacturing including:

- Solvent for food additives (i.e., colors, antioxidants, enzymes and emulsifiers)
- Flavor agent
- Humectant and stabilizer in items such as fruits, vegetables and bakery goods
- Low-temperature heat-transfer fluids involving indirect food contact, such as brewing and dairy uses, as well as refrigerated grocery display cases
- Plasticizer and softening agent for items such as cork seals
- Solvent for printing inks used in food packaging
- Equipment cleaner, to remove contamination from food processing equipment

#### **Pharmaceutical applications**

Typically in pharmaceutical applications, MPG is used as a non-active ingredient or carrier. MPG is used most frequently in oral, topical and injectable drug products.



## Packaging:

Packaging Type	Net weight	Gross weight	No. of drums per pallet	No. of pallets in a 20 FLC	Shelf life	IMCO Class
New Steel	220 Kgs	238 Kgs	4	20	2 yrs	Non-
Drums						Imco

Notice:

Customized packaging will be available according to customer's request.

## Safety, Handling & Storage:

Full information on the safety, handling and storage of MPG/ Pharmaceutical grade is available in the corresponding Material Safety Data Sheet (MSDS).



# Propylene Glycol

# Trade Name: MPG/Pharmaceutical grade

## Specification

Test	Standard	Reference	
	Clear, colorless, viscous liquid		
	having a slight, characteristic		
Description	taste. Is practically odorless.	USP44-NF39	
	Absorbs moisture when exposed		
	to moist air		
	Miscible with water. With acetone,		
	and with chloroform. Soluble in	USP44-NF39	
Solubility	ether and will dissolve many		
	essential oils, but is immiscible with		
	fixed oils.		
	A: Infrared Absorption Spectrum		
	obtained with standard Propylene		
	Glycol		
Identification	B: Limit of DEG & EG NMT 0.1	USP44-NF39	
	C: RT of PG chromatogram in B		
	complies Standard peak		
Specific gravity	1.035-1.037	USP44-NF39	
Acidity (as Acetic Acid)	NMT 0.2 mol of NaOH 0.1 N	USP44-NF39	
Chloride	NMT 70	USP44-NF39	
Sulphate	Min 60	USP44-NF39	
Residue on Ignition (in 50g)	NMT 3.5	USP44-NF39	
Assay (on a dry basis)	Min. 99.5	USP44-NF39	
Water	Max. 0.2	USP44-NF39	
Residual Solvents	Defined as Organic Volatile	USP44-NF39	
Residual Solvents	Chemicals		



## Website: <u>www.kimyagaran.com</u> Tel: +98-21-88746565 Fax: +98-21-88746564 E-Mail: <u>info@kimyagaran.com</u> Address: No.133, West Hoveizeh Street, North Sohrevardi Ave., Tehran, Iran