

# Technical Bulletin

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## PROPYLENE GLYCOL - USP

<b>GENERIC NAMES</b>	1,2 propanediol
<b>DESCRIPTION</b>	A relatively nontoxic liquid that is practically colorless, odorless, and tasteless.
<b>APPLICATIONS</b>	A solvent for flavors, extracts, drugs, and food antioxidants; a heat transfer medium; an emollient and humectant and plasticizer for tobacco products, baked goods, coconut, cellophane, cork, adhesives, and paper products; a lubricant and mold inhibitor for food processing equipment; a humectant for pet food.

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### SALES SPECIFICATIONS

This product meets the requirements of the Propylene Glycol monograph listed in the United States Pharmacopoeia (USP), latest edition, European Pharmacopoeia (EP), and Food Chemicals Codex (FCC).

<u>Property</u>	<u>Specifications</u>	<u>Test Method *</u>
Acidity (as acetic acid), wt.%	0.002 max.	ST-31.46, B
Appearance	Substantially free of suspended matter	ST-30.1
Ash, wt.%	0.005 max.	ST-31.12
Chlorides as Cl, ppm	0.5 max.	ST-4.44
Color, Pt-Co	10 max.	ST-30.12
Heavy metals as Pb, ppm	5 max.	ST-31.30
IR spectra	Passes	USP
Propylene Glycol, area % by gas chromatography	99.5 min.	ST-35.102
Specific gravity, 25/25°C	1.0350 min. 1.0370 max.	ST-30.31
Sulfate, ppm	60 max.	USP
Volatile organic impurities	Passes	USP-NF
Water, wt.%	0.2 max.	ST-31.53

\* Test methods are available upon request.

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#### QualiChem Technologies

QualiChem Technologies warrants only that its products meet the specifications stated herein. Typical properties, where stated, are to be considered as representative of current production and should not be treated as specifications. While all the information presented in this document is believed to be reliable and to represent the best available data on these products, NO GUARANTEE, WARRANTY, OR REPRESENTATION IS MADE, INTENDED, OR IMPLIED AS TO THE CORRECTNESS OR SUFFICIENCY OF ANY INFORMATION, OR AS TO THE SUITABILITY OF ANY CHEMICAL COMPOUNDS FOR ANY PARTICULAR USE, OR THAT ANY CHEMICAL COMPOUNDS OR USE THEREOF ARE NOT SUBJECT TO A CLAIM BY A THIRD PARTY FOR INFRINGEMENT OF ANY PATENT OR OTHER INTELLECTUAL PROPERTY RIGHT. EACH USER SHOULD CONDUCT A SUFFICIENT INVESTIGATION TO ESTABLISH THE SUITABILITY OF ANY PRODUCT FOR ITS INTENDED USE. Products may be toxic and require special precautions in handling. For all products listed, user should obtain detailed information on toxicity, together with proper shipping, handling and storage procedures, and comply with all applicable safety and environmental standards.

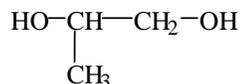
# PROPYLENE GLYCOL – USP

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## TYPICAL PROPERTIES

### Chemical Properties

Structure



Molecular Weight 76

### Physical Properties

Arsenic, ppm 1 max  
Boiling range, °C, IBP 185 min.  
ASTM, °C, DP 189 max.  
Flash point, PMCC, °F 212  
Freezing point, °C <-76  
Refractive index, 20°C 1.4310 min.  
1.4330 max.  
Vapor pressure, 20 °C, mm Hg <1  
Viscosity, 20°C, cp 60  
Water solubility, % >10  
Weight, 20°C, lb/gal 8.64

### Regulatory Information

DOT Classification not regulated  
Freight Classification propylene glycol  
HMIS Code 0-1-0  
CAS Number 57-55-6  
TSCA Inventory listed on or exempt.  
WHMIS Classification not regulated  
Canadian DSL listed on or exempt.  
European EINECS listed on or exempt.  
Australian AICS listed on or exempt.  
Japanese MITI listed on or exempt.

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### **PRODUCT SAFETY POLICY**

It is the product safety policy of QualiChem Technologies to provide our customers with information on the safe handling and use of our products. The Material Safety Data Sheet (MSDS) should always be read and understood thoroughly before handling the product, and adequate safety procedures should be followed. Information on the toxicity, environmental, and industrial hygiene aspects of our products may be found in the MSDS. Precautionary measures include: use only with adequate ventilation; avoid breathing vapor, mist or gas; avoid contact with eyes, skin and clothing; keep container closed; wash thoroughly after handling.

### **HANDLING, STORAGE, and SHIPPING**

Propylene Glycol USP is a high-purity material, which must be handled with special precautions to avoid contamination. Under ordinary conditions, mild steel is a satisfactory material of construction; however, for long term storage and where iron contamination and color are objectionable, stainless steel or aluminum vessels are recommended. For additional information on handling and storage of PG-USP, please contact the QualiChem Technologies. Product is available in barges, lined tank cars and dedicated tank trucks, and 55-gallon non-returnable drums, 480 pounds net weight. Please contact us for other sizes.

Certain government regulations may apply at the time of shipment.