

Technical Bulletin**TRIETHYLENE GLYCOL (TEG)**

2,2'-(1,2-ethanediylbis(oxy)) ethanol

TRIETHYLENE GLYCOL (TEG) is a straight-chain dihydric alcohol aliphatic compound terminated on both ends by a hydroxyl group. It is a clear, practically colorless and odorless, hygroscopic liquid at room temperature.

**APPLICATIONS**

- unsaturated polyester resins
- lubricant and coupling agents
- humectants and dehydrating agents
- polyester polyols
- plasticizers
- solvents

Triethylene glycol is used as a dehydrating agent for natural gas; a solvent and lubricant in textile dyeing and printing; a plasticizer; a raw material for the production of polyester resins and polyols; a humectant; a constituent of hydraulic fluids; a selective solvent for aromatics.

SALES SPECIFICATIONS

<u>Property</u>	<u>Specifications</u>	<u>Test Method*</u>
Appearance	Clear and substantially free of suspended matter	ST-30.1
Acidity (as acetic acid), wt%	0.01 max.	ST-31.46, B
Color, Pt-Co	25 max.	ST-30.12
Triethylene Glycol, wt%	95 min.	ST-35.210
Water, wt%	0.1 max.	ST-31.53, 5

*Non-proprietary Methods of Test are available from Huntsman Corporation upon request.

ADDITIONAL INFORMATION**Regulatory Information**

CAS Number 112-27-6

See SDS for all regulatory information.

Typical Properties

Flash point, COC, °C (°F)	168 (334)
Boiling range, °C (°F), by ASTM	
IBP	278 (532)
DP	300 (572)
Melting point, °C (°F)	-7 (19)
Molecular weight	150.17
pH, 1:1 aqueous dilution	7
Specific gravity, 20/20°C	1.13
Vapor pressure, mm Hg, 20°C (68°F)	< 0.01
Viscosity, cSt, 20°C (68°F)	43
VOC Content, %, by ASTM D2369	6
Water solubility, %	> 10

TOXICITY AND SAFETY

For additional information on the toxicity and safe handling of this product, consult the Safety Data Sheet prior to use of this product.

HANDLING AND STORAGE

Triethylene glycol (TEG) is a stable, non-corrosive chemical with high flash point. Since it is hygroscopic, storage vessels must be designed to minimize moisture pickup. Other possible contaminants are iron and oxygen. For longer-term storage, or where iron contamination and color are objectionable, resin linings or stainless steel and aluminum vessels are recommended. Linings based on phenolic and epoxy resins are satisfactory. Zinc or zinc alloys should not be used in glycol service. For longer-term color stability, it is recommended that the product be stored under an inert atmosphere.

Cast-iron or centrifugal pumps with stainless shafts and impellers are satisfactory. Rubber-lined or rubber-bound gaskets should be avoided. Flexible graphite filled or stainless steel double-jacketed gaskets are usually effective larger gaskets. Stainless steel winding with flexible graphite filler piping gaskets performs well. Pipe thread lubricants based on corrosion inhibiting zinc compounds or a graphite based lubricant with aluminum are generally satisfactory; however, glycols are excellent penetrants and leaks may be present where hydrostatic testing has indicated a tight system. Therefore, the system should be rechecked after the glycol has been added.

Low pressure stainless steel steam coils in storage tanks and steam tracing of transfer lines may need to be provided in cases where low environmental temperatures may make pumping of the product difficult. Transfer or storage tanks can be readily cleaned by flushing with water and steam.

SHELF LIFE

We define Shelf Life in terms of a product's conformance to sales specifications after a specified period of time. Using this as a guide, the product should retain its conformance to sales specifications for a period of at least two years from shipment, provided that the product is handled to minimize contact with air, and is stored at less than 100°F in a suitable tank under a dry nitrogen blanket. However, the user should determine the suitability of any chemical compound, regardless of its shelf life or length of time of storage. It is the user's responsibility to conduct a sufficient investigation to establish the suitability of any product for its intended use.

AVAILABILITY

Product is available in bulk quantities (tank cars, tank trucks). Bulk containers are stainless steel, aluminium, or suitably lined. Certain government regulations may apply at the time of shipment. Samples are available by contacting our sample department at 1-800-662-0924.

**Huntsman Corporation
Business Offices**

10003 Woodloch Forest Dr.
The Woodlands, TX 77380
(281) 719-6000

**Huntsman Advanced Technology
Center**

Technical Service
8600 Gosling Rd.
The Woodlands, TX 77381
(281) 719-7780

Samples 1-800-662-0924

www.huntsman.com

5036-1014

Copyright © 2007, 2008, 2010, 2014 Huntsman Corporation or an affiliate thereof. All rights reserved.

Huntsman Corporation 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, HUNTSMAN MAKES NO WARRANTY OR GUARANTEE OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, NON-INFRINGEMENT OF ANY INTELLECTUAL PROPERTY RIGHT OF ANY THIRD PARTY, OR WARRANTIES AS TO QUALITY OR CORRESPONDENCE WITH PRIOR DESCRIPTION OR SAMPLE, AND ANY USER OF PRODUCTS DESCRIBED HEREIN SHOULD CONDUCT A SUFFICIENT INVESTIGATION TO ESTABLISH THE SUITABILITY OF ANY PRODUCT FOR ITS INTENDED USE AND ASSUMES ALL RISK AND LIABILITY WHATSOEVER RESULTING FROM THE USE OF SUCH PRODUCT, WHETHER USED SINGLY OR IN COMBINATION WITH OTHER SUBSTANCES. Product(s) described in this publication may be hazardous and/or toxic and require special precautions in handling. For all product(s) described herein, the user should obtain from Huntsman detailed information on hazards and/or toxicity, together with proper shipping, handling, and storage procedures, and should comply with all applicable safety and environmental standards. The behavior, hazards and/or toxicity of the product(s) referred to in this publication in manufacturing processes and their suitability in any given end-use environment are dependent upon various conditions such as chemical compatibility, temperature, and other variables, which may not be known to Huntsman. It is the sole responsibility of the user of such product(s) to evaluate the manufacturing circumstances and the final product(s) under actual end-use requirements and to adequately advise and warn future purchasers and users thereof.