

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>
Acidity (as acetic acid), wt%	0.01 max.	ST-31.46, B
Appearance	Clear and substantially free of suspended matter	ST-30.1
Distillation, °C		ST-32.1
IBP	278 min.	
95%	295 max.	
DP	300 max.	
Color, Pt-Co	25 max.	ST-30.12
Water, wt. %	0.1 max.	ST-31.53, 5

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

ADDITIONAL INFORMATION**Regulatory Information**

DOT/TDG Classification	Not regulated
HMIS Code	2-1-0
WHMIS Classification	Class D-1B: Toxic
CAS Number	112-27-6

Chemical Control Laws

Australia, AICS	Listed
Canada, DSL	Listed
Europe, EINECS/ELINCS	Listed
Japan, METI	Listed
United States, TSCA	Listed

Typical Physical Properties

Boiling point, mm Hg, °C (°F)	288 (550)
Flash point, COC, °C (°F)	168 (335)
Freezing point, °C (°F)	-7.2 (19)
Molecular weight	150.17
pH	7
Specific gravity, 20/20°C	1.13
Vapor pressure, mm Hg, 20°C (68°F)	< 0.1
Viscosity, cSt, 20°C (68°F)	43
VOC Content by ASTM D 2369	6%
Water solubility (%)	> 10

PRODUCT SAFETY POLICY

It is the product safety policy of Huntsman Corporation 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.

TOXICITY AND SAFETY

For additional information on the toxicity and safe handling of this product, consult the Material 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.

AVAILABILITY

Product is available in tank cars, tank trucks or non-returnable drums (520 pounds net). Containers are stainless steel, aluminum 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.

TEG-1007

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