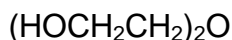


Technical Bulletin**DIETHYLENE GLYCOL (DEG)**

2,2'-oxybis ethanol

DIETHYLENE GLYCOL (DEG) is a straight-chain dihydric alcohol aliphatic compound terminated on both ends by a hydroxyl group. It is a clear, water-white, practically odorless, hygroscopic liquid at room temperature.

**APPLICATIONS**

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

Diethylene glycol is used as a dehydrating agent for natural gas; a raw material for the production of plasticizers and polyester resins; a humectant; a textile lubricant and coupling agent; a solvent in textile dyeing and printing; a constituent of hydraulic fluids; a plasticizer for paper, cork and synthetic sponges; a solvent in printing inks; a raw material for the production of esters used as emulsifiers, demulsifiers, and lubricants; a selective solvent for aromatics in petroleum refining.

SALES SPECIFICATIONS

<u>Property</u>	<u>Specifications</u>	<u>Test Method*</u>
Acidity (as acetic acid), wt%	0.005 max.	ST-31.46, B
Appearance	Clear and substantially free of suspended matter	ST-30.1
Distillation, IBP, °C	242 min.	ST-32.1
Distillation, DP, °C	250 max.	ST-32.1
Color, Pt-Co	15 max.	ST-30.12
Diethylene glycol, wt%	99 min.	ST-35.210
Iron, ppm	1.0 max.	ST-4.9
Water, wt%	0.20 max.	ST-31.53, 5

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

ADDITIONAL INFORMATION**Regulatory Information**

See MSDS for all regulatory information.

Typical Properties

Boiling point, mm Hg, °C (°F)	245 (473)
Flash point, CC, °C (°F)	154 (309)
Freezing point, °C (°F)	-11 (12)
Molecular weight	106.12
pH	7
Specific gravity, 20/20°C	1.12
Viscosity, cSt, 40°C (104°F)	14
VOC Content by ASTM D-2369	9%
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.

HANDLING AND STORAGE

Diethylene glycol (DEG) is a stable, non-corrosive chemical with high flash point. It has a tendency to increase in color and acidity (accompanied by drop in pH) upon long-term storage. Peroxides may also form causing difficulties when DEG is used as a chemical intermediate. To minimize this quality deterioration, store the DEG in stainless steel, aluminum or suitably lined (vinyl type lining like Amercoat 23 or equivalent) tank under an inert gas pad (preferably nitrogen). For temperatures below +40°F, provide low-pressure stainless steel steam coils in storage tanks and steam/electrical tracing of insulated transfer lines to ease pumping. Avoid temperatures above 120°F to prevent product degradation. Flushing with water and steam can readily clean transfer or storage tanks.

Pumps should be constructed of stainless steel where very low iron content is mandatory. Pressed asbestos gaskets are recommended for pumps. 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. White lead, glycerin, and Teflon tape pipe dopes are suitable.

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.

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