

**Technical Bulletin****ETHYLENE GLYCOL PRODUCTS**

The ethylene glycol family of products are clear, moderately viscous, hygroscopic liquids at room temperature. For your convenience, below is a summary of specifications and typical properties of the three major ethylene glycols: Ethylene Glycol (EG), Diethylene Glycol (DEG), and Triethylene Glycol (TEG).

| <b>SPECIFICATIONS</b>  | <b>Measure</b> | <b>EG-Industrial</b>                             | <b>DEG</b>                                       | <b>TEG</b>                                       |
|------------------------|----------------|--|--|--|
| Acidity as acetic acid | wt%            | 0.005 max.                                       | 0.005 max.                                       | 0.01 max.  |
| Appearance             | wt%            | Clear and substantially free of suspended matter | Clear and substantially free of suspended matter | Clear and substantially free of suspended matter |
| Ash                    | wt%            | 0.005 max.                                       | 0.005 max.                                       | 0.005 max.                                       |
| Color                  | wt%            | 10 max.  | 15 max.  | 25 max.  |
| Water                  | wt%            | 0.3 max.   | 0.2 max.   | 0.1 max.   |
| Ethylene Glycol        | wt%            | 99.5 min.  | -  | -  |
| Boiling range, IBP     | ASTM, °C       | -  | 242 min.   | 278 min.   |
| Boiling range, DP      | ASTM, °C       | -  | 250 max.   | 300 max.   |
| Iron as Fe             | ppm            | 1.0 max.   | -  | -  |
| Chlorides              | ppm            | 0.1 max.   | -  | -  |

| <b>TYPICAL PROPERTIES</b> |           | <b>of pure compounds</b> |          |          |
|---------------------------|-----------|--------------------------|----------|----------|
| Molecular weight          |           | 62                       | 106      | 150      |
| Boiling point, 760 mm Hg  | °C        | 197.2                    | 244.8    | 287.4    |
| Flash point, PMCC         | °F        | 244                      | 290      | 335      |
| Freezing point            | °C        | -13                      | -10.5    | -7.2     |
| Specific gravity          | 20/20°C   | 1.1155                   | 1.1184   | 1.1254   |
| Specific heat, 0°C        | Cal/gm/°C | 0.544                    | 0.551    | 0.525    |
| Viscosity, 20°C           | cP        | 20.9                     | 35.7     | 47.8     |
| Density, 20°C             | lb/gal    | 9.28                     | 9.31     | 9.36     |
| Water solubility          |           | Complete                 | Complete | complete |
| Vapor pressure, 20°C      | mmHg      | 0.1                      | 0.01     | 0.01     |

**APPLICATIONS**

Ethylene glycols find many diverse industrial uses which include freeze protection, heat transfer and hydraulic fluids; natural gas and hydrocarbon treating agents; hygroscopic agents for paper, cork and textile conditioning; plasticizer formulations and raw materials for ester and polyester production. The ethylene glycol family's solvency properties are useful in custom formulation of paints, dyes, inks and other blended products.

## ETHYLENE GLYCOL PRODUCTS

---

### 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 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.

### SHIPPING

Available in lined tank cars, tank trucks, or non-returnable drums. Certain government regulations may apply at the time of shipment. Please consult individual technical bulletins for more specific information.

5316-1110

**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**

Copyright © 2005, 2010 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.