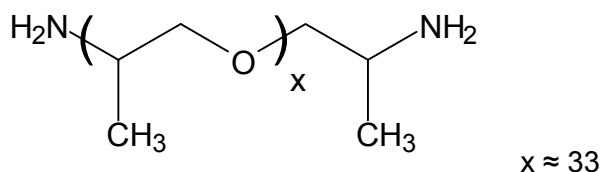


Technical Bulletin**JEFFAMINE[®] D-2000 Polyetheramine**

JEFFAMINE D-2000 polyetheramine is characterized by repeating oxypropylene units in the backbone. As shown by the representative structure, JEFFAMINE D-2000 polyetheramine is a difunctional, primary amine with average molecular weight of about 2000. The primary amine groups are located on secondary carbon atoms at the end of the aliphatic polyether chains.



- APPLICATIONS**
- Key ingredient in the formulation of polyurea and RIM
 - Co-reactant in epoxy systems which require increased flexibility and toughness

- BENEFITS**
- Low viscosity, color and vapor pressure
 - Improved flexibility from high molecular weight polyether backbone
 - Increases peel strength

SALES SPECIFICATIONS

<u>Property</u>	<u>Specifications</u>	<u>Test Method*</u>
Appearance	Colorless to pale yellow liquid with slight haze permitted	ST-30.1
Color, Pt-Co	25 max.	ST-30.12
Primary amine, % of total amine	97 min.	ST-5.34
Total acetylatables, meq/g	0.98 – 1.1	ST-31.39
Total amine, meq/g	0.98 – 1.05	ST-5.22
Water, wt%	0.25 max.	ST-31.53, 6

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

ADDITIONAL INFORMATION**Regulatory Information**

DOT/TDG Classification	Corrosive, liquids, N.O.S. (polyoxypropylene diamine)
HMIS Code	3-1-0
CAS Number	9046-10-0
US, TSCA	Listed
Canadian WHMIS Classification	D1B, E
Canada, DSL	Listed
European Union, EINECS/ELINCS	Polymer Exempt
Australia, AICS	Listed
Japan, ENCS	Contact Huntsman Regulatory
Korea, ECL	Listed
China, IECSC	Listed

Typical Physical Properties

AHEW (amine hydrogen equivalent wt.), g/eq	514
Equivalent wt. with isocyanates, g/eq	1030
Viscosity, cSt, 25°C (77°F)	248
Density, g/ml (lb/gal), 25°C	0.991(8.26)
Flash point, PMCC, °C (°F)	185 (365)
pH, 5% aqueous solution	10.5
Refractive index, n_D^{20}	1.4514
Vapor pressure, mm Hg/°C	0.93/235 4.95/254

TOXICITY AND SAFETY

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

HANDLING AND STORAGE

Materials of Construction

At temperatures of 75-100°F (24-38°C)

Tanks	Carbon steel
Lines, valves	Carbon steel
Pumps	Carbon steel
Heat exchange Surfaces	Stainless steel
Hoses	Stainless steel, polyethylene, polypropylene, and TEFLON®
Gaskets, packing	Polypropylene or TEFLON® (elastomers such as neoprene, Buna N, and VITON® should be avoided)
Atmosphere	Nitrogen or dry air

At temperatures above 100°F (38°C)

Tanks	Stainless steel or aluminum
Lines, Valves	Stainless steel
Pumps	Stainless steel or Carpenter 20 equivalent
Atmosphere	Nitrogen

JEFFAMINE® D-2000 polyetheramine may be stored under air at ambient temperatures for extended periods. A nitrogen blanket is suggested for all storage, however, to reduce the effect of accidental exposure to high temperatures and to reduce the absorption of atmospheric moisture and carbon dioxide. It should be noted that pronounced discoloration is likely to occur at temperatures above 140°F (60°C), whatever the gaseous pad.

Cleanout of lines and equipment containing JEFFAMINE D-2000 polyetheramine can be accomplished using warm water and steam. In the event of spillage of this product, the area may be flushed with water. The proper method for disposal of waste material is by incineration with strict observance of all federal, state, and local regulations.

AVAILABILITY

JEFFAMINE D-2000 polyetheramine is available in tank cars, tank wagons, and 55-gallon (208L) drums of 440 pounds (200kg) net weight. Samples are available in North America and Asia by contacting our sample department at 1-800-662-0924. Samples in other locations, including Europe, are available by contacting any Huntsman Corporation sales office

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

JEFFAMINE® is a registered trademark of Huntsman Corporation or an affiliate thereof in one or more, but not all countries.

VITON® and TEFLON® are registered trademarks Dupont.

Huntsman Petrochemical Corporation warrants only that its products meet the specifications stated in the sales contract. 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 MERCHANTABILITY OR SUITABILITY OR FITNESS OF ANY CHEMICAL COMPOUNDS FOR ANY PARTICULAR USE OR PURPOSE, 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. Liability of Huntsman Petrochemical Corporation and its affiliates for all claims is limited to the purchase price of the material. 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.

Main Offices US: Huntsman Corporation / 10003 Woodloch Forest Drive / The Woodlands, Texas 77380 / 281-719-6000
Technical Service US: 8600 Gosling Road / The Woodlands, Texas 77381 / 281-719-7780

Main Offices Europe: Huntsman Belgium BVBA / Everslaan 45 / B-3078 Everberg, Belgium / 32-2-758-9211
Technical Service Europe: Technical Services Representative / Everberg Office / 32-2-758-9392

Main Offices Asia Pacific: Huntsman Singapore PTE / 150 Beach Road #37-00 Gateway West / Singapore 189720 / 65 6297 3363
Technical Service Asia Pacific: Huntsman Performance Products / 61 Market Road, Brooklyn, Victoria / Australia 3012 / 61 3 9933 6666