

Technical Bulletin**ELASTAMINE[®] RT-1000 Amine**

ELASTAMINE[®] RT-1000 amine is a diamine of approximately 1000 molecular weight, based on a PTMEG [poly(tetramethylene ether glycol)]/PPG (polypropylene glycol) copolymer. Polyetheramines of this type are useful in a variety of polymers, including nylon, elastane, polyurea, and cured epoxy resins. In particular, higher molecular weight polyetheramines are used to improve flexibility and low temperature properties of nylons. They are also effective in flexibilizing and promoting adhesive peel strength in epoxy formulations.

APPLICATIONS

- Modification of thermoplastic polymers, such as nylon
- Modification of elastane (Spandex)

BENEFITS

- High flexibility from polyether backbone
- Amine end groups much more reactive than alcohol end groups
- Low color, low viscosity, and low vapor pressure
- Excellent fatigue resistance of nylon plastics
- Excellent transparency of nylon plastics

SALES SPECIFICATIONS

Property	Specifications	Test Method*
Appearance	Colorless to pale yellow liquid with slight haze permitted	ST-30.1
Color, Pt-Co	40 max.	ST-30.12
Total acetyltables, meq/g	1.97 min. – 2.07 max.	ST-31.39
Total amine, meq/g	1.91 min. – 2.04 max.	ST-5.35
Total amine, % of total acetyltables	96 min.	Calculated
Primary amine, % of total amine	98 min.	ST-5.34
Water, wt%	0.40 max.	ST-31.53, 6

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

ADDITIONAL INFORMATION**Regulatory Information**

DOT/TDG Classification	Amines, corrosive, liquids, N.O.S. (polyetheramine)
HMIS Code	3-1-0
CAS Number	796093-55-5
US, TSCA	Listed
Canadian WHMIS Classification	D1B, E
Canada, DSL	Not listed
European Union	Polymer exempt
Australia, AICS	Not listed
Japan, ENCS	Listed
Korea, ECL	Not listed
China, IECSC	Not listed

Typical Physical Properties

AHEW (amine hydrogen equivalent weight)	260
Equivalent wt. with isocyanates, g/eq	520
Viscosity, cSt, 40°C (104°F)	121
Density, g/ml (lb/gal), 25°C	0.976 (8.13)
Flash point, PMCC, °C (°F)	237 (460)
pH	10
Melting point **, °C (°F)	9 (48)

** Crystallizes at room temperature over several months

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 (34-38°C)**

Tanks	Carbon steel
Lines, valves	Carbon steel
Pumps	Carbon steel
Heat exchange Surfaces	Stainless steel
Hoses	Stainless steel, polyethylene, polypropylene, and TEFLON ^{® 1} fluoropolymers
Gaskets, packing	Polypropylene or TEFLON [®] fluoropolymers (elastomers such as neoprene, Buna N, and VITON ^{® 1} fluoroelastomers 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

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ELASTAMINE[®] RT-1000 amine 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. It should be noted that pronounced discoloration is likely to occur at temperatures above 140°F (60°C), whatever the gaseous pad.

Cleaning of lines and equipment containing ELASTAMINE[®] RT-1000 amine 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

ELASTAMINE[®] RT-1000 amine is available in 55-gallon (208 L) drums of 420 pounds (191 kg) 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.

ELRT-1000-0611

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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