

Technical Bulletin**ELASTAMINE[®] RP-405 amine**

ELASTAMINE[®] RP-405 amine is characterized by repeating oxypropylene units in the backbone. ELASTAMINE[®] RP-405 amine is a difunctional, primary amine with average molecular weight of about 440. The primary amines are located on secondary carbon atoms at the end of the aliphatic polyether chain. The polyether backbone contributes flexibility to polymers.

APPLICATIONS

- Modification of thermoplastic polymers, such as nylon

BENEFITS

- High flexibility from polyether backbone
- Amine end groups much more reactive than alcohol end groups
- Low viscosity and low color

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	30 max.	ST-30.12
Total acetylatables, meq/g	4.45 min. – 4.85 max.	ST-31.39
Total amine, meq/g	4.35 min. – 4.75 max.	ST-5.35
Total amine, % of total acetylatables	96 min.	Calculated
Primary amine, % of total amine	98 min.	ST-5.34
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	Amines, 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 weight)	110
Viscosity, cSt, 25°C (77°F)	22
Density, g/ml (lb/gal), 25°C	0.972 (8.10)
Flash point, PMCC, °C (°F)	163 (325)
pH, 5% aqueous solution	11.6
Refractive index, n_D^{20}	1.4482
Vapor pressure, mm Hg/°C	1/165 10/193

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[®] RP-405 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 line and equipment containing ELASTAMINE[®] RP-405 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[®] RP-405 amine is available in 55-gallon (208 L) drums of 440 pounds (200 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.

ELRP-405-1008

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