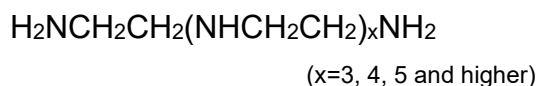


Technical Bulletin

ETHYLENEAMINE E-100

Ethyleneamine E-100 is a mixture of tetraethylenepentamine (TEPA), pentaethylenehexamine (PEHA), hexaethylenheptamine (HEHA), and higher molecular weight products. E-100 is a complex mixture of various linear, cyclic, and branched products with a number-average molecular weight of 250-300 g/mole.



APPLICATIONS

- Asphalt additives
- Corrosion inhibitors
- Epoxy curing agents
- Lube oil and fuel additives
- Mineral processing aids

SALES SPECIFICATIONS

<u>Property</u>	<u>Specifications</u>	<u>Test Method*</u>
Appearance	Amber to brown clear liquid, substantially free of foreign matter	ST-30.1
Amine Value, mg KOH/g	1100-1400	ST-31.182
Suspended matter/sediment, vol%	0.1 max.	ST-30.108
Tetraethylenepentamine, wt%	5.0 – 15.0	ST-35.222
Viscosity, cSt, 40°C	70 – 110	ST-30.6
Water, wt%	0.50 max.	ST-31.53, 6

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

ADDITIONAL INFORMATION

Regulatory Information

See SDS for all regulatory information.

Shelf Life

The product should retain its conformance to sales specifications for a period of at least 2 years from the date of manufacture if the product is stored at less than 100°F (37.8°C) in its undamaged, unopened, factory packaged container.

In general, the user should determine the suitability of any chemical compound, no matter what the shelf life or length of time of storage. Each user should conduct a sufficient investigation to establish the suitability of any product for the intended use.

Typical Properties

Flash point, PMCC, °C	>182 (359.6)
Amine value, mg KOH/g	1257
Density, g/ml, 20°C (68°F)	1.009
Kinematic viscosity, cSt, 25°C	229
Kinematic viscosity, cSt, 40°C	84.1
Nitrogen content, %	33.7
pH	11-12
Refractive index, 25°C	1.511
Specific gravity, 25/25°C	1.02
Vapor pressure, mm Hg, 20°C (68°F)	< 1
Water solubility, %	>10



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TOXICITY AND SAFETY

For information on the toxicity and safe handling of this product, consult the Safety Data Sheet prior to use of the product.

HANDLING AND STORAGE

In order to maintain the high degree of purity with which Ethyleneamine E-100 is manufactured and shipped, the following storage and handling considerations are recommended:

Dry Inert Gas Blanket

This product should be stored under a dry inert gas blanket, such as nitrogen, to minimize contamination resulting from contact with air and water.

Materials of Construction

Recommended storage construction for E-100 is stainless steel or carbon steel. If slight coloration of the ethyleneamine is acceptable, storage tanks may be made of carbon steel or black iron, provided they are free of rust and mill scale. However, if the amine is stored in such tanks, color may develop due to iron contamination. If iron contamination cannot be tolerated, tanks constructed of types 304 or 316 stainless steel should be used. (Note: Because they are quickly corroded by amines, do not use copper, copper alloys, brass, or bronze in tanks or lines.)

Storage Temperature

Ethyleneamine E-100 has a pour point of -21°C . To avoid freezing, the product should be maintained above this temperature. At temperatures below 5°C , viscosity becomes so high that the product cannot be easily pumped.

AVAILABILITY

Ethyleneamine E-100 is available in bulk and in drums of 452 pounds (205 kilograms) net weight. Small evaluation samples can be obtained by contacting any Huntsman Performance Products sales office.

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