

**MONOETHANOLAMINE (MEA) Premium Grade**

TU 2423-159-00203335-2004

All grade of industrial monoethanolamine is used in petrochemical and gas industries for absorption of acid gases and sulfur-containing organic substances. Premium monoethanolamine is also used in pharmaceutical, textile, paint and lacquers industries as well as in production of plastics.

MAIN QUALITY SPECIFICATIONS		
	PREMIUM Typical Value	PREMIUM Actual Value
<b>Monoethanolamine Mass Content, %, min</b>	98.8	99.3
<b>Diethanolamine Mass Content, %, min</b>	0.6	0.4
<b>Colour Hazen, max.</b>	50	20
<b>Density at 20 °C, g/cm<sup>3</sup></b>	1.015 – 1.018	1.018
<b>Water Mass Content, %, max.</b>	0.6	0.3

<b>Supply Form:</b>	Colorless transparent liquid with ammonium odor free of mechanical impurities
<b>Packaging:</b>	Product is shipped in railway tank-cars or tank-cars
<b>Transportation:</b>	Product to be transported in railway tank-cars by all covered transportation means according to the current Rules for Transportation of Dangerous Goods.
<b>Storage:</b>	Product shall be stored away from open fire in sealed containers (steel or aluminum drums or railway tank-cars) in heated during the winter time and ventilated storages, min. 2 meters away from heating devices. Storage of this product in sealed containers on the sheltered open areas by preventing direct sunrays and atmospheric precipitates is permitted. However, containers shall have air-valve in order to exclude the possibility of vacuum formation by evacuation and increasing of pressure by filling. As "layer" can be used either dry rare gas or by short storage - dried gas. Expire date - 1 year from the production date.

**DIETHANOLAMINE (DEA) Pure**

TU 2423-178-00203335-2007 rev. I

Diethanolamine is used in production of plasticizers, emulsifiers, detergents, dispersants for paints, cosmetics, retarding agent against corrosion; in synthesis of medicine; as absorbent of sour gases from the industrial mixtures.

MAIN QUALITY SPECIFICATIONS		
	PURE Typical Value	PURE Actual Value
<b>Appearance</b>	A dense viscous transparent liquid or crystals of colorless to yellow color	A dense viscous transparent liquid of yellow color
<b>Diethanolamine Mass Content, %, min</b>	98	100
<b>Refraction Index at 20 °C</b>	1.4760-1.4790	1.4775
<b>Appearance of diethanolamine aqueous solution with volume fraction of %50 (water solubility)</b>	Transparent solution, low opalescence is permitted	Transparent solution
<b>Crystallization Temperature, °C, min</b>	25.7	27.3

<b>Supply Form:</b>	Liquid with strong ammonium odor
<b>Packaging:</b>	Product is shipped in railway tank-cars or tank-cars
<b>Transportation:</b>	Product to be transported in railway tank-cars by all covered transportation means according to the current Rules for Transportation of Dangerous Goods.
<b>Storage:</b>	Product shall be stored away from open fire in sealed containers (steel or aluminum drums or railway tank-cars) in heated during the winter time and ventilated storages, min. 2 meters away from heating devices. Storage of this product in sealed containers on the sheltered open areas by preventing direct sunrays and atmospheric precipitates is permitted. Expire date - 1 year from the production date.

**NIZH YUG - MAIN COMMERCIAL & MARKETING OFFICE**

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