

## Triethanolamine (TEA)

### TEA 85.0%

Characteristic	Test Method	Unit	Value
PURITY	MA – 503 (GC)	WT%	85 MIN.
SP. GR (20/20 °C)	ASTM D -891	-	1.122 - 1.130
WATER	ASTM D -1364	WT%	0.2 MAX.
MEA	MA-503	WT%	0.5 MAX.
DEA	MA-503	WT%	15.0 MAX.
COLOR	ASTM D -1209	Pt-Co	50 MAX.

### TEA 99.0%

Characteristic	Test Method	Unit	Value
PURITY	MA – 503	WT%	99 MIN.
SP. GR (20/20 °C)	ASTM D -891	-	1.122 - 1.127
WATER	ASTM D -1364	WT%	0.2MAX
COLOR	ASTM D -1209	Pt-Co	40 MAX.

TRIETHANOLAMINE obtained from the reaction between ammonia and ethylene oxide. TRIETHANOLAMINE, have a low volatility at room temperature, is hygroscopic, presents an ammoniac odor and can appear in solid or liquid form depending on the temperature and the purity grade.

#### o Application areas:

- Detergents :

TRIETHANOLAMINE is recommended as a component in detergent formulations for laundry and dishwashing, degreasers, multiple use detergents and disinfectants.

TRIETHANOLAMINE is recommended as an alkalizing agent for dodecylbenzene sulfonic acid, resulting in the formation of an organic salt that is more soluble in water than sulfonic acid neutralized with sodium hydroxide, promoting the obtainment of liquid detergents for manual dish washing with a lower cloud point and greater stability, making the use of hydrotopes such as urea unnecessary.

TRIETHANOLAMINE can also be used to alkalize long-chain fatty acids such as lauryl, ricinoleic, oleic and stearic acids, forming TRIETHANOLAMINE soap that is soluble in water with an emulsifying effect in liquid soap-base detergent formulations and in transparent pine oil-based disinfectants, promoting a blooming effect when the disinfectant is diluted in water.

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Since it is a weak base, **TRIETHANOLAMINE** can be used as a neutralizer agent in car wash shampoos, polishing waxes, degreasing non-corrosive detergents, liquid laundry detergents and multiple use cleaners.

- **Agrochemicals :**

**TRIETHANOLAMINE** is used as neutralizer agent for anionic emulsifiers.

**TRIETHANOLAMINE** can be used in the preparation of agricultural compounds obtained from 2,4D acid (2, 4 dichloro phenoxiacetic).

- **Treatment of gases :**

**Ethanolamines** can be used to treat natural gas and petroleum residual gas in the absorption of carbon dioxide.

- **Additives for cement :**

**Ethanolamines** are used as auxiliary agents in concrete milling. Low concentrations of **TRIETHANOLAMINE** accelerate the hardening rate of concrete while high concentrations have a retarding effect on hardening.

- **Other uses :**

**Ethanolamines** can also be used in the formulation of pharmaceutical products, dispersing agents for glues, gums, latex and photographic developers, accelerators of rubber vulcanization, corrosion inhibitors, pH controllers, synthesis intermediates, lacquer, paint, wax and polisher wetting agents, polymerizing agents and catalysts for polyurethane resins.

- **Storage conditions:**

Since this product is hygroscopic we recommend provide the tanks with an inert atmosphere such as of nitrogen to reduce the absorption of water and to avoid darkening through contact with the air. We recommend storing **MONOETHANOLAMINE**, by bulk in stainless steel 316 or 304 tanks, equipped with a water or vapor heating coil to maintain the products at a temperature above their solidification point.

- **Packing:**

Bulk or in 220 Lit (net: 220 Kg) new drums, each 4 drums strapped on a pallet.