TEA 99

TRIETHANOLAMINE

CHEMICAL DESCRIPTION

TEA is a clear viscous hygroscopic liquid at room temperature with a mild Ammonical odor.

APPLICATIONS

- **Cement & Concrete**

  TEA and its salts are added to cement clinkers to increase the efficiency of the grinding Mill by reducing the particle agglomerations.In concrete, TEA accelerates set time and increase early set strength.

- **Textile**

  TEA is used in the manufacturing of environmental friendly textile fabric softener formulations.

- **Oil filed**

  TEA is used in enhanced oil recovery. Crude oil/ water emulsion are demulsified by TEA.

- **Personal care**

  TEA is used as a neutralizing agent for lauryl ether sulphate which is a common shampoo base and offers significant mildness over SLES.

- **Home Care**

  TEA is used as a neutralizing agent in liquid laundry, dishwashing and cleaning products to improve solubility.

- **Electroplating**

  TEA is used in electro deposition baths for Zinc.

- **Cosmetics**

  TEA is also used a neutralizing agent in skin care formulations.

- **Metal working**

  TEA derivatives obtained by the reaction of fatty acids are used as emulsifiable oils and, cutting fluids. TEA is an excellent chelating agent in basic solutions. This chelating ability makes TEA particularly useful in metal cleaning.

- **Coatings**

  TEA is used as accelerator for photo polymerization coatings.

- **Mining**

  TEA is used as a depressant in the floatation of copper & as an aid in the froth floatation of Nickel.

SPECIFICATIONS

Properties	Method	Value
Appearance @30oC	SKIMS/QAD-SOP-168	Clear Liquid
Triethanolamine (Wt %), Min.	SKIMS/QAD-SOP-293	99.2
Monoethanolamine (Wt %), Max.	SKIMS/QAD-SOP-293	0.1
Diethanolamine (Wt %), Max.	SKIMS/QAD-SOP-293	0.5
Color (APHA)	ASTM D 1209	50
Water, wt. % max.	ASTM E 203	0.2
Iron (Wt ppm), Max.	SKIMS/QAD-SOP-160	10

TYPICAL PHYSICAL PROPERTIES

Specific gravity 20/20 °C : 1.125.
Freezing point: 21°C.
Boiling Point: 360°C.
Flash Point (Open Cup); 190°C.

SHELF LIFE

TEA can be stored up to 9 months from the date of manufacture in original, unopened, properly stored containers. Beyond 9 months, recommends the quality of material to be conformed prior to use, by retesting the Certificate of Analysis Parameters.

TOXICITY AND SAFETY

For information on toxicity, safety and safe disposal please refer to Material Safety Data Sheet (MSDS) for this product.

STORAGE & HANDLING

The most suitable material for storage of TEA is 300 Series Stainless Steel (SS 316 or SS 304). However, Pure Aluminum can also be used for storing TEA. In case, some iron contamination or product discoloration is acceptable by end user, carbon steel tanks can also be used for storage. In case of carbon steel tanks, it is recommended to coat the tanks with In case of carbon steel tanks, it is recommended to coat the tanks with Plasite 9570 or Plasite 7122 (Available from Stoncor Group).The recommended storage temperature is 40°C.

Regardless of the type of storage tank (Steel, Aluminum or Carbon Steel), all transfer lines and internal coils used for maintaining storage temperature must be 300 Series Stainless Steel (SS 316 or SS 304).

For longer term color stability, it is recommended that the product is stored under inert atmosphere. Solid sediments may form upon standing. Therefore circulation in storage vessel is recommended to keep these solids suspended.

TEA is a regulated product under CWC (Chemical Weapon Convention) and registration is required prior to sale and use in the country of origin and destination.