

TRIETHYLAMINE (TEA)

Specifications

CAS NO.

CAS NO.	121-44-5
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NATURE

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PHYSICAL PROPERTIES

Empirical Formula	C ₆ H ₁₅ N
Structural formula	(C ₂ H ₅) ₃ N
Molecular Wt.	101.19
Sp. Gravity at 20 °C	0.726-0.730
Refractive Index	1.4010
Boiling Point	89.4 °C
Freezing Point	<-114.8 °C
Colour (APHA) Max	20
Solubility in Water	Partly soluble
Flash Point	-6.7 °C
Autoignition Temperature	249 °C
Flammability Limits	L E L: 1.2 Vol % H E L: 8.0 Vol %

Vapour Pressures

Pressures in mm of Hg	Temperature in °C
40	12.0
100	32.5
300	62.0
760	88.8

SPECIFICATIONS

Purity min. (wt. %) by GC	99.5
Water Content (max.) % by wt.	0.10
Impurities (max.) % by wt.	0.40

MSDS

FIRE PROPERTIES

- Extremely flammable liquid.
- Spontaneous when exposed to flames and moderate when exposed to heat.
- Ignition may take place above 30 deg. Cen. when mixed with oxidants.

EFFECTS

- They irritate skin, eyes, respiratory system and mucous membranes.
- Concentration more than 1 % in vol. in affects, directly the skin even if the respiratory System is protected
- High concentrations may affect nervous system, burning of skin, tear formation feeling of suffocation, etc.
- Strongly alkaline in reaction may directly affect skin, causing severe burns.
- Aquatic toxicity .

PERSONAL SAFETY AND FIRST AID

- In case of Ingection of liquid and inhalation of DEA vapours.Carry victim to fresh air, administer oxygen is available.
- If the liquid is swallowed by mouth rinse eyes, nose cavity and mouth, ensuring that washing are not swallowed by the patient.
- Do not allow the victim to walk and keep him warm.
- In the event of contact with eyes, flush the eyes thoroughly with water.
- Call a doctor or take the victim to the hospital immediately.

HANDLING & STORAGE

- Use goggles, face shields, rubber gloves, apron, gum boots, gas masks.
- In case of high concentration of vapour (more than 1% vol) use self Contained breathing apparatus.

SPILLAGE DISPOSAL

- Mop up with plenty of water and run to waste diluting greatly. With running water.
- Ventilate area well to evaporate remaining liquid and disperse vapour.

Applications

PHARMACEUTICALS: Used as an intermediate in the manufacture of Antibiotics like Penicillin, Ampicillin, Amoxycillin, Cephalexin and other derivatives.

PAINT INDUSTRY: Used in manufacture of Electro Deposit Paints.

AGRO CHEMICALS: As an intermediate or catalytic agent for Pesticides such as Fenvalerate, Butachlor, DDVP, Cypermethrin, Monocrotophos, Fonaphos, Phosphamidon and Alfamethrin.

FOUNDRY CHEMICALS: In Foundry industry as Cross linking agents (Binders)

PERFUMERY CHEMICALS: As catalyst in the esterification reaction to manufacture perfumes.

STORAGE: Can be handled in a safe manner in containers. Can be stored for a long period in closed containers. Avoid contact with copper and its alloys. TEA tends to darken on standing.

HEALTH & SAFETY: Triethylamine is irritating to skin, eyes and mucous membrane. In case of contact, affected area should be washed with plenty of water. A dilute solution of Acetic Acid (2%) should be used to neutralize the Amine.

Continuous inhalation of fumes and ingestion should be avoided. In event of inhalation or ingestion, victim should be moved to fresh air and oxygen should be administered. Vapours of Acetic acid (2%) or vinegar diluted 1:5 with water should be inhaled. To dilute the chemical in stomach, patient should consume copious quantity of milk and water.

A medical practitioner should be consulted at once.

PACKAGING: 150 kg. net wt. in UN Approved Mild Steel Drums.

IMDG CLASS: Class 3

PACKING GROUP AS PER IMO: II

UN CODE NO: 1296

BRUSSELS T.NO. : 2921.19.10