



## SAFETY DATA SHEET

### TRIETHANOLAMINE

#### 1. IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER

Product name:	TRIETHANOLAMINE
Recommended use:	Chemical for industrial
Manufacturer/Supplier:	<b>MODERN CHEMICAL CO.,LTD.</b> 82/80 Soi Ekamai 22 (Nuannoi), Sukhumvit 63, Klong Tan Nuea, Watthana, Bangkok 10110
Telephone No:	0-2715-0897-9, 0-2392-3410-3
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#### 2. HAZARDS IDENTIFICATION

##### Label elements

Pictogram



Signal word

Warning

##### Hazard statement(s):

- 1.) Causes skin irritation.
- 2.) Causes serious eye irritation.
- 3.) May cause an allergic skin reaction.
- 4.) May cause damage to organs (liver, kidney) through prolonged or repeated exposure.

##### Precautionary statement(s):

- 1.) Wear protective gloves and eye / face protection.
- 2.) Contaminated work clothing should not be allowed out of the workplace.
- 3.) Do not breathe mist/vapours/spray.



- 4.) IF ON SKIN: Wash with plenty of soap and water.
- 5.) If skin irritation or rash occurs, seek medical attention.
- 6.) Take off contaminated clothing and wash before reuse.
- 7.) IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do  
Continue rinsing.
- 8.) If eye irritation persists. Get medical advice/ attention.
- 9.) Store locked up.
- 10.) Dispose of contents/container in accordance with local/regional/national/international/regulations.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Synonym:** 2,2',2'' – nitrilotriethanol, Ethanol, 2,2',2''-nitrilotris, (2-Hydroxyethyl)amine, 2,2',2''-Trihydroxy-triethylamine

Ingredients	% (w/w)	CAS NO.
TRIETHANOLAMINE	100	102-71-6

### 4. FIRST AID MEASURES

- Inhalation:** If irritation, headache, nausea, or drowsiness occurs, remove to fresh air. Get medical attention if breathing become difficult or respiratory irritation persists.
- Skin contact:** Wash skin with plenty of soap and water for several minutes. Get medical attention if skin irritation develops or persists.
- Eye contact:** In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid.
- Ingestion:** If patient of conscious and can swallow, give two glasses of water (16 oz.), Include vomiting as directed by medical personnel. Do not include vomiting or give anything by mouth to an unconscious or convulsing person.

### 5. FIRE-FIGHTING MEASURES

**Suitable extinguishing media:**

Use water spray, dry chemical, Foam or carbon dioxide to extinguish flames. Use water spray to cool fire-exposed containers. Water of foam may cause frothing.

**Unsuitable Extinguishing Media:**

No data available.



### Specific hazards arising from Chemicals:

No data available.

### Special protective equipment for fire-fighters:

Wear full protective clothing and positive pressure breathing apparatus.

## 6. ACCIDENTAL RELEASE MEAS

**Precautions:** Remove persons to safety and ventilate area. Avoid breathing vapor, contacting with skin, eyes or clothing.

**Environmental precautions:** Prevent entry into sewer and waterways.

### Methods and Material for Containment and Clean Up:

Wear appropriate personal protective equipment, including appropriate respiratory protection. Contain spill if possible. Wipe up or absorb on suitable material and shovel up.

## 7. HANDLING AND STORAGE

### Precautions for Safe Handling & Product Transfer:

Minimum feasible handling temperatures should be maintained. Eye wash and safety shower should be available nearby when this product is handled or used.

### Conditions for Safe Storage & Unsuitable Materials:

Always keep in containers of same material as the original one

Proper material: Iron, Stainless steel, polyethylene

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Occupational Exposure Limits:** No data available

**Appropriate Engineering Controls:** No data available

### Individual Protection Measures

**Respiratory protection:** Airborne concentrations should be kept to lowest levels possible. If vapor, mist or dust is generate and the occupational exposure limit of the product, or any component of the product, is exceeded, use appropriate NIOSH approved air purifying or air supplied respirator after determining the airborne concentration of



the contaminant. Air supplied respirators should always be worn when airborne concentration of the contamination or oxygen content is unknown.

- Hand protection:** Wear impervious chemical resistant gloves.
- Eye protection:** Avoid eye contact. Chemical type goggles should be worn. Don not wear contact lenses
- Skin and body protections:** Workers should be wash exposed skin several times daily with soap and water. Soiled work clothing should be laundered or dry - cleaned.
- Hygiene measures:** Immediately change contaminated clothing. Apply skin-protective barrier cream. Wash hands and face after working with substance.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Form, Color and Odor :</b> liquid, colorless , ammonia-like	<b>Evaporation rate :</b> N/A
<b>Melting Point :</b> 20.5 °C	<b>Specific gravity :</b> 1.125 g/cm <sup>3</sup> at 20 °C
<b>pH :</b> 11 (basic)	<b>Solubility in water :</b> Soluble > 1000 g/l at 20 °C
<b>Boiling point :</b> 336.1 °C at 1013.25°C	<b>Viscosity :</b> N/A
<b>Vapour pressure :</b> <0.0003 hPa at 21°C	<b>Vapor density (air=1) :</b> N/A
<b>Lower explosive limits :</b> 1.3 %Vol	<b>Upper explosive limits :</b> 8.5 %Vol
<b>Auto-ignition temperature :</b> N/A	<b>Flash point:</b> 179°C
<b>Odour threshold:</b> N/A	<b>Flammability (solid, gas):</b> N/A
<b>Decomposition temperature:</b> N/A	<b>Solubility in other solvents:</b> N/A
<b>n-octanol/water partition coefficient (log P<sub>ow</sub>):</b> N/A	

## 10. STABILITY AND REACTIVITY

- Chemical Stability:** No data available.
- Reactions:** No data available.
- Possibility of Hazardous Reactions:** This material may react violently with acids.
- Conditions to avoid:** Heating.
- Materials to avoid:** Strong oxidizing agents, Copper, Zinc, Aluminum, Alloys.
- Hazardous decomposition products:** Nitrogen, carbon dioxide, carbon monoxide, aldehydes, ketones.



## 11. TOXICOLOGICAL INFORMATION

<b>Acute toxicity:</b>	LD50 (Oral, rat): 6400 mg/kg LD50 (Dermal, rabbit): >2000 mg/kg
<b>Sensitization:</b>	Toxic to skin: Causes skin irritation. May cause an allergic skin reaction. Toxic to eye: Causes serious eye irritation. Specific target organ: May cause damage to organs (liver, kidney) through prolonged or repeated exposure.
<b>Chronic toxicity:</b>	No data available.
<b>Further toxicological information:</b>	No data available.

## 12. ECOLOGICAL INFORMATION

Toxicity	
Toxicity to fish:	LC50 - Pimephales promelas: 11800 mg/l - 96h
Toxicity to daphnia and other aquatic invertebrates:	
	EC50 – Ceriodaphnia dubia: 609.88 mg/l – 48h EC50 – Daphnia magna: 16 mg/l- 21 day
Toxicity to algae:	EC50 – Desmodesmus subspicatus: 512 mg/l -72h
Toxicity to bacteria:	No data available.
Biodegradability Remarks:	No data available.
Bioaccumulative Potential:	This product is not expected to bio-accumulate.
Mobility:	This product is not expected to selectively partition and absorb to soil or sediments.
Affected in any other way:	No data available.

## 13. DISPOSAL CONSIDERATIONS

<b>Material Disposal:</b>	This product has been evaluated for RCRA characteristics and does not meet the criteria of a hazardous waste if discarded in its purchased form. Under RCRA, it is the responsibility of the product to determine at the time of disposal, whether the product meets RCRA criteria for hazardous waste. This is because product uses, transformations, mixtures, processes etc. may render the resulting materials hazardous.
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**Container Disposal:** No data available.

#### 14. TRANSPORT INFORMATION

##### ADR/ADNR

Not dangerous goods

##### IMGD

Not dangerous goods

##### IATA

Not dangerous goods

#### 15. REGULATORY INFORMATION

##### TSCA Inventory Status:

This product, or its components, or are exempt from the Toxic Substance Control Act(TSCA) Chemical Substance Inventory

##### WHMIS classification:

Class D, DIV 2, Subdiv B: Irritant

##### Canadian Inventory Status:

This product, or its components, or are exempt from the Canadian Domestic Substance List (DSL).

##### EINECS Inventory Status:

This product, or its components, or are exempt from the European Inventory of Existing Chemical Substance (EINECS) or the European List of Notified Chemical Substance (ELINCS).

##### Australian Inventory Status:

This product, or its components, or are exempt from the Australian Inventory of Chemical Substance (AICS).

##### Japan Inventory status:

This product, or its components, or are exempt from the Japan Ministry of Economy, Trade and Industry (METI) inventory.

##### China Inventory status:

This product, or its components, or are exempt from the Inventory of Existing Chemical Substance in China (IECSC). The copyright of the Inventory of Existing Chemical Substance in (IECSC) belongs to the Chemical Registration Center of SEPA.

##### Korea Inventory status:



This product, or its components, or are exempt from the Korea Existing and Evaluated Chemical Substance (KECL) inventory.

**New Zealand Inventory status:**

This product, or its components, or are exempt from the New Zealand Inventory of Chemical (NZIoC).

**Philippine Inventory status:**

This product, or its components, or are exempt from the Philippine Inventory of Chemical (PICCS).

**16. Other Information**

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