

## SAFETY DATA SHEET

Creation Date 03-Nov-2010

Revision Date 25-Apr-2019

Revision Number 5

### 1. Identification

**Product Name** Triethanolamine

**Cat No. :** AC139560000; AC139560010; AC139560025; AC139560250;  
AC139560251; AC139561000

**CAS-No** 102-71-6  
**Synonyms** 2,2',2''-Nitrilotriethanol; TEA

**Recommended Use** Laboratory chemicals.  
**Uses advised against** Food, drug, pesticide or biocidal product use.  
**Details of the supplier of the safety data sheet**

**Company**  
Fisher Scientific  
One Reagent Lane  
Fair Lawn, NJ 07410  
Tel: (201) 796-7100

Acros Organics  
One Reagent Lane  
Fair Lawn, NJ 07410

**Emergency Telephone Number**  
For information **US** call: 001-800-ACROS-01 / **Europe** call: +32 14 57 52 11  
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99  
**CHEMTREC** Tel. No.**US**:001-800-424-9300 / **Europe**:001-703-527-3887

### 2. Hazard(s) identification

**Classification**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin Sensitization	Category 1B
Specific target organ toxicity - (repeated exposure)	Category 2
Target Organs - Kidney, Liver.	

**Label Elements**

**Signal Word**  
Warning

**Hazard Statements**  
May cause an allergic skin reaction  
May cause damage to organs through prolonged or repeated exposure

**Precautionary Statements****Prevention**

Do not breathe dust/fume/gas/mist/vapors/spray

Wear protective gloves/protective clothing/eye protection/face protection

**Response**

Get medical attention/advice if you feel unwell

**Skin**

IF ON SKIN: Wash with plenty of soap and water

If skin irritation or rash occurs: Get medical advice/attention

Take off contaminated clothing and wash before reuse

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

None identified

### 3. Composition/Information on Ingredients

Component	CAS-No	Weight %
Triethanolamine	102-71-6	>95

### 4. First-aid measures

<b>Eye Contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
<b>Skin Contact</b>	Wash off immediately with plenty of water for at least 15 minutes. Get medical attention.
<b>Inhalation</b>	Remove to fresh air. If breathing is difficult, give oxygen. Get medical attention.
<b>Ingestion</b>	Do NOT induce vomiting. Get medical attention.
<b>Most important symptoms and effects</b>	No information available.
<b>Notes to Physician</b>	Treat symptomatically

### 5. Fire-fighting measures

<b>Suitable Extinguishing Media</b>	Water spray, carbon dioxide (CO <sub>2</sub> ), dry chemical, alcohol-resistant foam.
<b>Unsuitable Extinguishing Media</b>	No information available
<b>Flash Point</b>	190 °C / 374 °F
<b>Method -</b>	No information available
<b>Autoignition Temperature</b>	325 °C / 617 °F
<b>Explosion Limits</b>	

<b>Upper</b>	8.5 vol %
<b>Lower</b>	1.3 vol %
<b>Sensitivity to Mechanical Impact</b>	No information available
<b>Sensitivity to Static Discharge</b>	No information available

**Specific Hazards Arising from the Chemical**

Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.

**Hazardous Combustion Products**

Nitrogen oxides (NOx). Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Hydrogen cyanide (hydrocyanic acid). Formaldehyde.

**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**NFPA**

<b>Health</b>	<b>Flammability</b>	<b>Instability</b>	<b>Physical hazards</b>
2	1	0	N/A

**6. Accidental release measures**

**Personal Precautions** Use personal protective equipment as required. Ensure adequate ventilation. Avoid contact with skin, eyes or clothing.

**Environmental Precautions** Should not be released into the environment. See Section 12 for additional Ecological Information.

**Methods for Containment and Clean Up** Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

**7. Handling and storage**

**Handling** Wear personal protective equipment/face protection. Ensure adequate ventilation. Do not breathe mist/vapors/spray. Avoid contact with skin, eyes or clothing. Do not ingest. If swallowed then seek immediate medical assistance.

**Storage** Keep containers tightly closed in a dry, cool and well-ventilated place. Keep under nitrogen.

**8. Exposure controls / personal protection****Exposure Guidelines**

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH	Mexico OEL (TWA)
Triethanolamine	TWA: 5 mg/m <sup>3</sup>			TWA: 5 mg/m <sup>3</sup>

*Legend*

ACGIH - American Conference of Governmental Industrial Hygienists

**Engineering Measures** Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

**Personal Protective Equipment**

**Eye/face Protection** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin and body protection** Wear appropriate protective gloves and clothing to prevent skin exposure.

**Respiratory Protection** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if

exposure limits are exceeded or if irritation or other symptoms are experienced.

**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

<b>Physical State</b>	Liquid Viscous liquid
<b>Appearance</b>	Light yellow
<b>Odor</b>	Ammonia-like
<b>Odor Threshold</b>	No information available
<b>pH</b>	10.5 15 g/L water
<b>Melting Point/Range</b>	21 °C / 69.8 °F
<b>Boiling Point/Range</b>	360 °C / 680 °F
<b>Flash Point</b>	190 °C / 374 °F
<b>Evaporation Rate</b>	No information available
<b>Flammability (solid,gas)</b>	Not applicable
<b>Flammability or explosive limits</b>	
<b>Upper</b>	8.5 vol %
<b>Lower</b>	1.3 vol %
<b>Vapor Pressure</b>	<0.01 mmHg @ 20 °C
<b>Vapor Density</b>	5.14
<b>Specific Gravity</b>	1.125
<b>Solubility</b>	No information available
<b>Partition coefficient; n-octanol/water</b>	No data available
<b>Autoignition Temperature</b>	325 °C / 617 °F
<b>Decomposition Temperature</b>	No information available
<b>Viscosity</b>	600 mPa.s at 25 °C
<b>Molecular Formula</b>	C6 H15 N O3
<b>Molecular Weight</b>	149.19

## 10. Stability and reactivity

<b>Reactive Hazard</b>	None known, based on information available
<b>Stability</b>	Hygroscopic. Air sensitive.
<b>Conditions to Avoid</b>	Incompatible products. Excess heat. Exposure to air. Exposure to light. Exposure to moist air or water.
<b>Incompatible Materials</b>	Strong oxidizing agents, Acids, Metals
<b>Hazardous Decomposition Products</b>	Nitrogen oxides (NO <sub>x</sub> ), Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> ), Hydrogen cyanide (hydrocyanic acid), Formaldehyde
<b>Hazardous Polymerization</b>	Hazardous polymerization does not occur.
<b>Hazardous Reactions</b>	None under normal processing.

## 11. Toxicological information

**Acute Toxicity****Product Information****Component Information**

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Triethanolamine	LD50 = 4190 mg/kg ( Rat )	>16 mL/kg ( Rat ) >2000 mg/kg ( Rabbit )	Not listed

**Toxicologically Synergistic Products** No information available

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

<b>Irritation</b>	Irritating to eyes
<b>Sensitization</b>	Did not cause sensitization on laboratory animals
<b>Carcinogenicity</b>	The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Triethanolamine	102-71-6	Not listed				

**Mutagenic Effects** No information available

**Reproductive Effects** No information available.

**Developmental Effects** No information available.

**Teratogenicity** No information available.

**STOT - single exposure** None known

**STOT - repeated exposure** Kidney Liver

**Aspiration hazard** No information available

**Symptoms / effects, both acute and delayed** No information available

**Endocrine Disruptor Information** No information available

**Other Adverse Effects** The toxicological properties have not been fully investigated.

## 12. Ecological information

### Ecotoxicity

Do not empty into drains.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Triethanolamine	EC50: = 169 mg/L, 96h (Desmodesmus subspicatus) EC50: = 216 mg/L, 72h (Desmodesmus subspicatus)	LC50: > 1000 mg/L, 96h static (Pimephales promelas) LC50: 10600 - 13000 mg/L, 96h flow-through (Pimephales promelas) LC50: 450 - 1000 mg/L, 96h static (Lepomis macrochirus)	EC50 > 10000 mg/L 30 min	EC50: = 1386 mg/L, 24h (Daphnia magna)

**Persistence and Degradability** Soluble in water Persistence is unlikely based on information available.

**Bioaccumulation/ Accumulation** No information available.

**Mobility** . Will likely be mobile in the environment due to its water solubility.

Component	log Pow
Triethanolamine	-2.53

## 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## 14. Transport information

<b>DOT</b>	Not regulated
<b>TDG</b>	Not regulated
<b>IATA</b>	Not regulated

IMDG/IMO Not regulated

## 15. Regulatory information

United States of America Inventory

Component	CAS-No	TSCA	TSCA Inventory notification - Active/Inactive	TSCA - EPA Regulatory Flags
Triethanolamine	102-71-6	X	ACTIVE	-

**Legend:**

TSCA - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

-' - Not Listed

TSCA 12(b) - Notices of Export Not applicable

International Inventories

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Australia (AICS), China (IECSC), Korea (ECL).

Component	CAS-No	DSL	NDSL	EINECS	PICCS	ENCS	AICS	IECSC	KECL
Triethanolamine	102-71-6	X	-	203-049-8	X	X	X	X	KE-25940

U.S. Federal Regulations

SARA 313 Not applicable

SARA 311/312 Hazard Categories See section 2 for more information

CWA (Clean Water Act) Not applicable

Clean Air Act Not applicable

OSHA - Occupational Safety and Health Administration Not applicable

CERCLA Not applicable

California Proposition 65 This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Triethanolamine	X	X	X	-	X

U.S. Department of Transportation

Reportable Quantity (RQ): N

DOT Marine Pollutant N

DOT Severe Marine Pollutant N

U.S. Department of Homeland Security

This product contains the following DHS chemicals:

**Legend** - STQs = Screening Threshold Quantities, APA = A placarded amount

Component	DHS Chemical Facility Anti-Terrorism Standard
Triethanolamine	Theft STQs - 220lb

Other International Regulations

Mexico - Grade Slight risk, Grade 1

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## 16. Other information

<b>Prepared By</b>	Regulatory Affairs Thermo Fisher Scientific Email: EMSDS.RA@thermofisher.com
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<b>Print Date</b>	25-Apr-2019
<b>Revision Summary</b>	This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

### Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of SDS**