

## SAFETY DATA SHEET

Creation Date 03-Nov-2010

Revision Date 23-May-2017

Revision Number 3

### 1. Identification

**Product Name** Triethanolamine

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

**Synonyms** 2,2',2''-Nitrilotriethanol; TEA

**Recommended Use** Laboratory chemicals.

**Uses advised against** Not for 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. Obtain medical attention.
<b>Skin Contact</b>	Wash off immediately with plenty of water for at least 15 minutes. Obtain medical attention.
<b>Inhalation</b>	Move to fresh air. If breathing is difficult, give oxygen. Obtain medical attention.
<b>Ingestion</b>	Do not induce vomiting. Obtain medical attention.
<b>Most important symptoms/effects Notes to Physician</b>	No information available. Treat symptomatically

### 5. Fire-fighting measures

<b>Suitable Extinguishing Media</b>	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
<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 (NO<sub>x</sub>) 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**

**Health**  
2

**Flammability**  
1

**Instability**  
0

**Physical hazards**  
N/A

**6. Accidental release measures**

<b>Personal Precautions</b>	Use personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing.
<b>Environmental Precautions</b>	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**

<b>Handling</b>	Wear personal protective equipment. Ensure adequate ventilation. Do not breathe vapors or spray mist. Avoid contact with skin, eyes and clothing. Do not ingest.
<b>Storage</b>	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>			

**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**

<b>Eye/face Protection</b>	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.
<b>Skin and body protection</b>	Wear appropriate protective gloves and clothing to prevent skin exposure.
<b>Respiratory Protection</b>	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.
<b>Hygiene Measures</b>	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

Flash Point	190 °C / 374 °F
Evaporation Rate	No information available
Flammability (solid,gas)	Not applicable
Flammability or explosive limits	
Upper	8.5 vol %
Lower	1.3 vol %
Vapor Pressure	<0.01 mmHg @ 20 °C
Vapor Density	5.14
Specific Gravity	1.125
Solubility	No information available
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	325 °C / 617 °F
Decomposition Temperature	No information available
Viscosity	600 mPa.s at 25 °C
Molecular Formula	C6 H15 N O3
Molecular Weight	149.19

## 10. Stability and reactivity

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

Irritation	Irritating to eyes
Sensitization	Did not cause sensitization on laboratory animals
Carcinogenicity	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	Not listed	Not listed	Not listed	Not listed

**Mutagenic Effects** No information available

**Reproductive Effects** No information available.

**Developmental Effects** No information available.

<b>Teratogenicity</b>	No information available.
<b>STOT - single exposure</b>	None known
<b>STOT - repeated exposure</b>	Kidney Liver
<b>Aspiration hazard</b>	No information available
<b>Symptoms / effects, both acute and delayed</b>	No information available
<b>Endocrine Disruptor Information</b>	No information available
<b>Other Adverse Effects</b>	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: 450 - 1000 mg/L, 96h static (Lepomis macrochirus) LC50: > 1000 mg/L, 96h static (Pimephales promelas) LC50: 10600 - 13000 mg/L, 96h flow-through (Pimephales promelas)	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
<b>IMDG/IMO</b>	Not regulated

## 15. Regulatory information

### International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	IECSC	KECL
Triethanolamine	X	X	-	203-049-8	-		X	X	X	X	X

#### Legend:

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated

polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

### U.S. Federal Regulations

**TSCA 12(b)** Not applicable

**SARA 313** Not applicable

#### **SARA 311/312 Hazard Categories**

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

**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:

Component	DHS Chemical Facility Anti-Terrorism Standard
Triethanolamine	0 lb STQ

### **Other International Regulations**

**Mexico - Grade** Slight risk, Grade 1

## 16. Other information

**Prepared By** Regulatory Affairs  
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**Creation Date** 03-Nov-2010  
**Revision Date** 23-May-2017  
**Print Date** 23-May-2017  
**Revision Summary** 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**