

# Safety Data Sheet

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

Trade name/designation:	Triethanolamine Analytical reagent
Product No.:	T0229
Synonymes:	2,2',2''-Nitrilotriethanol, Tris-(2-hydroxyethyl)amine
CAS No.	102-71-6

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses:	General chemical reagent
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### 1.3 Details of the supplier of the safety data sheet

#### Supplier

#### Avantor Performance Materials India Ltd.

Street	501, 5th floor, Tiffany Building, Hiranandani Business Park,
Postal code/city	Thane, Maharashtra - 400607, India
Telephone	022-41288100

#### Emergency phone number

Telephone	1800105561
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#### Preparation Information

Product Information Compliance

1.4 E-mail	SDS@avantorsciences.com
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## SECTION 2: Hazard identification

### 2.1 Classification of the substance or mixture

The substance is classified as not hazardous.

### 2.2 Label elements

The product does not have to be labelled.

2.3 Other hazards	not applicable
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**SECTION 3: Composition / information on ingredients****Substances**

Substance name	Triethanolamine (Trolamine)
Molecular formula	$C_6H_{15}NO_3$
Molecular weight	149.19 g/mol
CAS No.	102-71-6

**SECTION 4: First aid measures****4.1 General information**

When in doubt or if symptoms are observed, get medical advice. If unconscious place in recovery position and seek medical advice. Never give anything by mouth to an unconscious person or a person with cramps. Change contaminated, saturated clothing. Do not leave affected person unattended.

**After inhalation**

Remove casualty to fresh air and keep warm and at rest. If breathing is irregular or stopped, administer artificial respiration. In case of respiratory tract irritation, consult a physician.

**In case of skin contact**

After contact with skin, wash immediately with plenty of water and soap. Remove contaminated, saturated clothing immediately. In case of skin reactions, consult a physician.

**After eye contact**

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Protect uninjured eye. Remove contact lenses, if present and easy to do. Continue rinsing.

**In case of ingestion**

If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention. Do NOT induce vomiting. Give nothing to eat or drink.

**4.2 Most important symptoms and effects, both acute and delayed**

no data available

**4.3 Indication of any immediate medical attention and special treatment needed**

no data available

no data available

**SECTION 5: Firefighting measures****5.1 Extinguishing media****Suitable extinguishing media**

The product itself does not burn.

Co-ordinate fire-fighting measures to the fire surroundings.

**Extinguishing media which must not be used for safety reasons**

no restriction

**5.2 Special hazards arising from the substance or mixture**

In case of fire may be liberated:

Carbon monoxide

Carbon dioxide (CO<sub>2</sub>)

Nitrogen oxides (NO<sub>x</sub>)

### **5.3 Advice for firefighters**

DO NOT fight fire when fire reaches explosives.

Special protective equipment for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

### **5.4 Additional information**

Do not allow run-off from fire-fighting to enter drains or water courses.

Do not inhale explosion and combustion gases.

Use water spray jet to protect personnel and to cool endangered containers.

In case of fire: Evacuate area.

## **SECTION 6: Accidental release measures**

### **6.1 Personal precautions, protective equipment and emergency procedures**

Avoid dust formation. Do not breathe dust/fume/gas/mist/vapours/spray. Provide adequate ventilation. Use personal protection equipment.

### **6.2 Environmental precautions**

Do not allow to enter into surface water or drains.

### **6.3 Methods and material for containment and cleaning up**

Spilled product must never be returned to the original container for recycling. Soak up inert absorbent and dispose as waste requiring special attention. Collect in closed and suitable containers for disposal.

### **6.4 Additional information**

Clear spills immediately.

## **SECTION 7: Handling and storage**

### **Precautions for safe handling**

Avoid:

Inhalation

Avoid contact with eyes and skin.

Use extractor hood (laboratory).

If handled uncovered, arrangements with local exhaust ventilation have to be used.

If local exhaust ventilation is not possible or not sufficient, the entire working area must be ventilated by technical means.

Usual measures for fire prevention.

Handle under (Gas):

Protective gas, dry

### **Conditions for safe storage, including any incompatibilities**

Recommended storage temperature: Keep bottles tightly closed and away from sources of ignition and heat.

Keep container tightly closed and in a well-ventilated place.

### **Specific end use(s)**

no data available

<b>SECTION 8: Exposure controls/personal protection</b>
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**8.1 Control parameters**

Does not contain substances above concentration limits fixing an occupational exposure limit.

**8.2 Exposure controls****Appropriate engineering controls**

no data available

**Personal protection equipment**

no data available

*Eye/face protection*

no data available

*Skin protection*

Wear suitable gloves. When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. In the case of wanting to use the gloves again, clean them before taking off and air them well. Check leak tightness/impermeability prior to use.

By short-term hand contact

Suitable material: NBR (Nitrile rubber)

Thickness of the glove material: 0,12 mm

Breakthrough time (maximum wearing time): 60-120 min

By long-term hand contact

Suitable material: NBR (Nitrile rubber)

Thickness of the glove material: 0,38 mm

Breakthrough time (maximum wearing time): > 480 min

*Respiratory protection*

no data available

*Additional information*

no data available

*Environmental exposure controls*

no data available

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

- |                      |                   |
|----------------------|-------------------|
| (a) Appearance       |                   |
| Physical state:      | viscous           |
| Colour:              | colourless        |
| (b) Odour:           |                   |
|                      | no data available |
| (c) Odour threshold: |                   |
|                      | no data available |

### Safety relevant basic data

- |  |  |
|--|--|
| (d) pH:                                      | 10.5 (15 g/l; H <sub>2</sub> O; 20 °C) |
| (e) Melting point/freezing point:            | 21.6 °C                                |
| (f) Initial boiling point and boiling range: | 335.4 °C (1013 hPa)                    |
| (g) Flash point:                             | 179 °C (closed cup)                    |
| (h) Evaporation rate:                        | no data available                      |
| (i) Flammability (solid, gas):               | not applicable                         |
| (j) Flammability or explosive limits         |  |
| Lower explosion limit:                       | 3.6 % (v/v)                            |
| Upper explosion limit:                       | 7.2 % (v/v)                            |
| (k) Vapour pressure:                         | 5 mPa (40 °C)                          |
| (l) Vapour density:                          | 5.14 (20 °C)                           |
| (m) Relative density:                        | 1.13 g/cm <sup>3</sup> (20 °C)         |
| (n) Solubility(ies)                          |  |
| Water solubility (g/L):                      | soluble (20 °C)                        |
| Soluble (g/L) in Ethanol:                    | no data available                      |
| (o) Partition coefficient: n-octanol/water:  | -1.82 (20 °C)                          |
| (p) Auto-ignition temperature:               | 325 °C (DIN 51794)                     |
| (q) Decomposition temperature:               | no data available                      |
| (r) Viscosity                                |  |
| Kinematic viscosity:                         | no data available                      |
| Dynamic viscosity:                           | 600 mPa*s (25 °C)                      |
| (s) Explosive properties:                    | not applicable                         |
| (t) Oxidising properties:                    | not applicable                         |

### 9.2 Other information

- |                        |                        |
|------------------------|------------------------|
| Bulk density:          | no data available      |
| Refraction index:      | 1.4852 (589 nm; 20 °C) |
| Dissociation constant: | no data available      |
| Surface tension:       | no data available      |
| Henry's Law Constant:  | no data available      |

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

no data available

### 10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature).

**10.3 Possibility of hazardous reactions**

no data available

**10.4 Conditions to avoid**

no data available

**10.5 Incompatible materials**

no data available

**10.6 Hazardous decomposition products**

no data available

<b>SECTION 11: Toxicological information</b>
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**11.1 Information on toxicological effects****Acute effects**

*Acute oral toxicity:*

LD50: < 5000 mg/kg - Rat - (Merck KGaA)

*Acute dermal toxicity:*

LD50: < 2000 mg/kg - Rabbit - (Merck KGaA)

*Acute inhalation toxicity:*

no data available

**Irritant and corrosive effects**

*Primary irritation to the skin:*

not applicable

*Irritation to eyes:*

not applicable

*Irritation to respiratory tract:*

not applicable

**Respiratory or skin sensitisation**

In case of skin contact: not sensitising

After inhalation: not sensitising

**STOT-single exposure**

not applicable

**STOT-repeated exposure**

not applicable

**CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)****Carcinogenicity****Germ cell mutagenicity**

No indications of human germ cell mutagenicity exist.

**Reproductive toxicity**

No indications of human reproductive toxicity exist.

**Aspiration hazard**

not applicable

**Other adverse effects**

no data available

<b>SECTION 12: Ecological information</b>
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**12.1 Ecotoxicity****Fish toxicity:**

LC50: 11800 mg/l (96 h) - Geiger, D.L., L.T. Brooke, and D.J. Call 1990. Acute Toxicities of Organic Chemicals to Fathead Minnows (*Pimephales promelas*), Volume 5. Ctr.for Lake Superior Environ.Stud., Univ.of Wisconsin-Superior, Superior, WI :332 p.

**Daphnia toxicity:**

EC50: 610 mg/l (48 h) - Warne, M.S.J., and A.D. Schifko 1999. Toxicity of Laundry Detergent Components to a Freshwater Cladoceran and Their Contribution to Detergent Toxicity. Ecotoxicol.Environ.Saf. 44(2):196-206

**Algae toxicity:**

no data available

**Bacteria toxicity:**

no data available

**12.2 Persistence and degradability**

no data available

**12.3 Bioaccumulative potential**

Partition coefficient: n-octanol/water: -1.82 (20 °C)

**12.4 Mobility in soil:**

no data available

**12.5 Results of PBT/vPvB assessment**

no data available

**12.6 Other adverse effects**

no data available

**SECTION 13: Disposal considerations****13.1 Waste treatment methods****Appropriate disposal / Product**

Dispose according to local legislation. Consult the appropriate local waste disposal expert about waste disposal. Send to a hazardous waste incinerator facility under observation of official regulations.

**Appropriate disposal / Package**

Dispose according to local legislation. Handle contaminated packages in the same way as the substance itself.

**SECTION 14: Transport information****Land transport (ADR/RID)**

No dangerous good in sense of this transport regulation.

**Sea transport (IMDG)**

No dangerous good in sense of this transport regulation.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code  
not relevant

**Air transport (ICAO-TI / IATA-DGR)**

No dangerous good in sense of this transport regulation.



**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****SECTION 16: Other information****Abbreviations and acronyms**

ACGIH - American Conference of Governmental Industrial Hygienists  
ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road  
AGS - Committee on Hazardous Substances (Ausschuss für Gefahrstoffe)  
CLP - Regulation on Classification, Labelling and Packaging of Substances and Mixtures  
DFG - German Research Foundation (Deutsche Forschungsgemeinschaft)  
Gestis - Information system on hazardous substances of the German Social Accident Insurance (Gefahrstoffinformationssystem der Deutschen Gesetzlichen Unfallversicherung)  
IATA-DGR - International Air Transport Association-Dangerous Goods Regulations  
ICAO-TI - International Civil Aviation Organization-Technical Instructions  
IMDG - International Maritime Code for Dangerous Goods  
LTV - Long Term Value  
NIOSH - National Institute for Occupational Safety and Health  
OSHA - Occupational Safety & Health Administration  
PBT - Persistent, Bioaccumulative and Toxic  
RID - Regulation concerning the International Carriage of Dangerous Goods by Rail  
STV - Short Term Value  
SVHC - Substances of Very High Concern  
vPvB - very Persistent, very Bioaccumulative

**Additional information**

Indication of changes: none

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