

1. PRODUCT NAME: Triethanolamine
2. CHEMICAL NAME:
3. SYNONYMS:
4. CAS NUMBER: 102-71-6
5. COMPOSITION: Triethanolamine (102-71-6) - 100%

IN CASE OF  
TRANSPORT EMERGENCY  
CONTACT CHEMTREC  
USA: 1-800-424-9300  
INTERNATIONAL: 1-703-527-3887

6. PROPERTIES: ODOR & APPEARANCE: clear, colorless to pale yellow, hygroscopic liquid with slight ammonia odor  
ODOR THRESHOLD: not known  
VAPOUR PRESSURE: below 0.001mmHg/0.00013kPa (30 c)  
EVAPORATION RATE (butyl Acetate=1): not known, not considered volatile  
VAPOR DENSITY (air=1): 5.1  
BOILING RANGE: 190 c/325 F (at 5mmHg) – decomposes at ~ 335 c/635 F  
FREEZING POINT: 21 c/70 F – product liable to supercool  
SPECIFIC GRAVITY: 1.124 (20/20 c)  
WATER SOLUBILITY: complete  
IN OTHER SOLVENTS: soluble in the lower alcohols and ketones; insoluble in aliphatic hydrocarbons  
VISCOSITY: 590 centipoise (25 c)  
PH: 10.5 – (0.1 Normal solution)  
FLASH POINT: 179 C/354 F (Closed cup)  
AUTOIGNITION TEMPERATURE: not known  
FLAMMABLE LIMITS: not known  
COMBUSTION PRODUCTS: carbon monoxide, nitrogen oxides, smoke, part oxidized hydrocarbon fragments  
FIREFIGHTING PRECAUTIONS: foam, dry chemical, water fog, water spray only to cool & dilute, product floats on water – water jet spreads flames; firefighters must wear SCBA  
STATIC DISCHARGE: may accumulate a static charge  
MECHANICAL IMPACT: not sensitive  
CHEMICAL STABILITY: stable; will not polymerise  
REACTIVE WITH: strong oxidizing agents, may react violently with strong acids & acid anhydrides; corrodes copper and its alloys, and zinc  
DECOMPOSITION PRODUCTS: gradually oxidizes to yellow color in air-42-2) - 15%

7. HAZARDS: HMIS (USA): Health - 2, Fire - 1, Reactivity - 0

8. FIRE FIGHTING INFORMATION: FLASH POINT: 179 C/354 F (Closed cup)  
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Carolina International Sales Co., Inc

## MATERIAL SAFETY DATA SHEET

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Matthews, NC 28105  
(704) 845 9440

www.ciscochem.com

DECOMPOSITION PRODUCTS: gradually oxidizes to yellow color in air

9. PERSONAL HANDS: butyl, neoprene or nitrile rubber or "Viton" gloves may be worn  
PROTECTION EYES: safety glasses with side shields or chemical goggles  
MEASURES: VENTILATION: not required unless product mist or vapor is created by handling or heating  
CLOTHING: boots, protective sleeves and apron of butyl, neoprene or nitrile rubber or "Viton" recommended  
NOTE: Protective clothing is highly recommended for people likely to come into contact with this product for prolonged periods of time. If only brief contact with the hands is possible, gloves, sleeves, boots & apron may not be necessary. However, always wear safety glasses or goggled to protect eyes against splashed product!  
If product does contact skin, wash off promptly, but do not panic! The product's effect on skin is slow.

10. FIRST AID SKIN: Wash with soap and plenty of water. Remove contaminated clothing and do not reuse until thoroughly cleaned or laundered.  
PROCEDURES: EYES: Wash eyes with plenty of water, holding eyelids open. Seek medical assistance promptly if there is irritation after washing.  
INHALATION: Remove from contaminated area promptly. CAUTION: Rescuer must not endanger himself! If breathing stops, administer artificial respiration and seek medical aid promptly.  
INGESTION: Give plenty of water to dilute product. Do not induce vomiting (NOTE below). Keep victim quiet. If vomiting occurs, lower victim's head below hips to prevent inhalation of vomited material. Seek medical help promptly.  
NOTE: Inadvertent inhalation of vomited material may seriously damage the lungs. The risk and danger of this is greater than the risk of poisoning through absorption of this relatively low-toxicity product. The stomach should only be emptied under medical supervision, after the installation of an airway to protect the lungs.

11. EXPOSURE TWAEV/TLV mg/m3: 5mg/m3  
LIMITS: LD50 ORAL: 2200  
SKIN (mg/kg): 18.000  
LC50 mg/m3 INHALATION: not known

12. TOXICOLOGICAL EFFECTS ACUTE EXPOSURE  
INFORMATION: SKIN CONTACT: may be slightly irritating  
SKIN ABSORPTION: yes; no toxic effects likely by this route, but one study has shown slight effects  
EYE CONTACT: mildly irritating; probably will not damage eyes  
INHALATION: vapor irritate, but very low vapor pressure greatly reduces risk of inhalation  
INGESTION: little or no effect  
EFFECTS OF CHRONIC EXPOSURE  
GENERAL: prolonged absorption or 2% TEA in drinking water damages kidneys and liver and retards growth in rodents  
SENSITISING PENETRATION: may sensitise – sensitization – sensitization enhanced by detergents which promote skin penetration  
CARCINOGENIC: not considered a tumorigen or a carcinogen in humans or animals  
REPRODUCTIVE EFFECT: no known effect on humans  
SYNERGISTIC WITH: not known  
LD50: 5530mg/kg (oral, rat), 2200mg/kg (oral, rabbit & guinea pig); 5850mg/kg (oral, mouse); 22,500mg/kg (skin, rabbit), 18,000mg/kg (skin, rat)  
LC50: not known

13. ECOLOGICAL This product cannot accumulate in living tissue. This product is readily biodegradable in the presence of



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**INFORMATION:** oxygen; testing indicates 752% Biodegradation within 28 days in a Biological Oxygen Demand test; half life in air ~4 hours

**14. DISPOSAL CONSIDERATIONS:** DO NOT FLUSH TO SEWER; may be incinerated in facility with flue gas monitoring and scrubbing

**15. CARCINOGENIC PROPERTIES & NOTIFICATIONS:** Not considered a tumorigen or a carcinogen in humans or animals.

**16. TRANSPORT INFORMATION:** USA 49 CFR  
Product identification number: UN - not regulated for transport  
Shipping name: not regulated for transport  
Classification: not regulated for transport  
Label: none required  
WHMIS Class: D 2b

**17. HANDLING & STORAGE:** This product is very hygroscopic (absorbs moisture from air). Store and use in a cool dry environment, away from sources of ignition, acids, acid anhydrides and oxidizing agents. Use with adequate ventilation if product mist could be released or if product is heated strongly to produce vapor. Do not cut, drill, weld or grind on or near this container. Avoid contact with skin and wash work clothes frequently. An eye bath and safety shower should be available near the workplace.

**18. ACCIDENTAL RELEASE MEASURES:** LEAK PRECAUTION: dyke to control spillage and prevent environmental contamination.  
HANDLING SPILL: ventilate contaminated area; recover free liquid with suitable pumps; absorb residue on an inert sorbent, sweep, shovel, & store in closed containers for recycling and disposal.

**19. REGULATORY INFORMATION:** ALLOWABLE TOLERANCE: Residues of amine salts of alkyl (C8-C24) benzene-sulfonic acid are exempt from the requirement of a tolerance when used as a surfactant or related adjuvants of surfactants in accordance with good agricultural practices as inert (or occasionally active) ingredients in pesticide formulations applied to growing crops or to raw agricultural commodities after harvest. Residues of triethanolamine are exempted from the requirement of a tolerance when used as a stabilizer or inhibitor for formulations used before crop emerges from soil in accordance with good agricultural practices as inert (or occasionally active) ingredients in pesticide formulations applied to growing crops or to raw agricultural commodities after harvest. Amine salts of alkyl (C8-C24) benzenesulfonic acid is exempt from the requirement of a tolerance when used as a surfactant adjuvants of surfactants in accordance with good agricultural practice as inert (or occasionally active) ingredients in pesticide formulations applied to animals.  
THRESHOLD LIMIT VALUES: 8hr Time Weighted Avg (TWA): 5mg/cu m. Excursion Limit Recommendation: Excursions in worker exposure levels may exceed three times the TLV-TWA for no more than a total of 30 min during a work day, and under no circumstances should they exceed five times the TLV-TWA, provided that the TLV-TWA is not exceeded.  
TSCA REQUIREMENTS: Section 8(a) of TSCA requires manufactures of this chemical substance to report preliminary assessment information concerned with production, use, and exposure to EPA as cited in the preamble in 51 FR 41329. Pursuant to section 8(d)



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of TSCA, EPA promulgated a model Health and Safety Data Reporting rule. The section 8(d) model rule requires manufactures, importers, and processors of listed chemical substances and mixtures to submit to EPA copies and lists of unpublished health and safety studies. Triethanolamine is included on this list.

**FIFRA REQUIREMENTS:** As the federal pesticide law FIFRA directs, EPA is conducting a comprehensive review of older pesticides to consider their health and environmental effects and make decisions about their future use. Under this pesticide reregistration program, EPA examines health and safety data for pesticide active ingredients initially registered before November 1, 1984, and determines whether they are eligible for reregistration. In addition, all pesticides must meet the new safety standard of the Food Quality.