

Safety Data Sheet: Triethanolamine 85%

1. Identification

Product	Triethanolamine 85%; CAS 102-71-6; EC 203-049-8
Use	Industrial neutralization and formulation.
Company	Hainan Zhongxin Chemical Co., Ltd. (ZXCHEM)
Address	Room 1001, Building A, Caohejing Center, No. 1520 Gumei Road, Xuhui District, Shanghai, China
Telephone / email	+86-21-54265599 / sales@zxchem.com.cn
Emergency contact	ZXCHEM office number above, office hours, China time (UTC+8). For urgent medical assistance contact local emergency services.
Scope	Reference safety information for Triethanolamine 85%. The reference composition, concentration and supply-grade differences are described in Section 3. This document does not certify the composition or transport status of a specific delivered batch or a different formulation.

2. Hazards Identification

Classification	Skin irritation Category 2; serious eye damage Category 1; reproductive toxicity Category 2. The source label additionally reports repeated-exposure organ effects.
Signal word / symbols	Danger; GHS05, GHS08
Hazard statements	H315: skin irritation. H318: serious eye damage. H361fd: suspected reproductive harm. H373: repeated-exposure organ harm reported on the source label.
Prevention	Use adequate ventilation; avoid inhaling mist. Prevent skin and eye contact. Wear suitable chemical-resistant gloves and eye protection. Wash after handling; keep food and drink out of the work area.
Response	After exposure, stop work and seek medical advice. For severe exposure obtain urgent medical care. Rinse contaminated skin or eyes with water; move an inhalation casualty to fresh air.
Environment	Prevent uncontrolled release to drains, soil or surface water. Collect spills for appropriate disposal.



3. Composition / Information on Ingredients

Reference ingredient	Reference commercial mixture: triethanolamine CAS 102-71-6 at 80–90% and diethanolamine CAS 111-42-2 at 10–20%. Delivered TEA control ≥85%; exact other-component percentages are not inferred.
Supply grade	Triethanolamine ≥85% wt
Applicability	The cited concentration or purity describes the reference material. It is not a certificate of analysis for the delivered batch; different solvents or dilutions require the matching supplier safety document.

4. First-Aid Measures

General	Protect the rescuer from exposure and show the product information to medical personnel. Obtain medical advice if symptoms occur or exposure is significant.
Inhalation	Move to fresh air and keep the person comfortable. Seek medical care for breathing difficulty or persistent symptoms. Avoid exposing rescuers to mist.
Skin	Remove contaminated clothing and rinse skin thoroughly with water. Seek medical advice for persistent irritation.
Eyes	Rinse gently with clean water for at least 15 minutes. Remove contact lenses when easy and continue rinsing. Obtain urgent medical care.
Ingestion	Rinse the mouth. Do not induce vomiting. Give nothing by mouth to an unconscious person. Obtain medical advice.
Effects / treatment	Eye injury, skin irritation and composition-dependent reproductive and repeated-exposure hazards require controls. Treatment is symptomatic and directed by a clinician.

5. Fire-Fighting Measures

Extinguishing media	Use water spray, foam, dry chemical or carbon dioxide suited to the surrounding fire.
Hazards	Fire or severe heating can generate carbon and nitrogen oxides.
Protection	Firefighters require suitable protective clothing and self-contained breathing equipment. Prevent contaminated firefighting water entering drains.

6. Accidental Release Measures

Personnel	Isolate the spill and provide ventilation. Use chemical-resistant gloves and eye protection; avoid contact and mist exposure.
Environment	Contain the release and protect drains and waterways. Report significant environmental contamination to the responsible authority.
Cleanup	Stop the leak if safe. Absorb liquid with a compatible inert material and collect in closed labelled containers. Do not wash into drains.

7. Handling and Storage

Handling	Use controlled liquid transfer with ventilation where mist can form. Wear suitable chemical-resistant gloves, protective clothing and eye/face protection. Avoid prolonged skin exposure and contamination with nitrosating agents; wash thoroughly after handling.
Storage	Keep tightly closed in a cool, dry, ventilated place, preferably below 40°C. Protect from moisture uptake, excessive heat and direct sunlight. Separate acids, oxidizers and nitrosating agents.
Incompatibilities	Acids, strong oxidizers and nitrosating agents.

8. Exposure Controls / Personal Protection

Exposure limits	The selected reference does not establish a region-specific mixture occupational limit. Apply current limits for the actual TEA/DEA composition and control mist exposure.
Engineering controls	Use local extraction where mist can be generated. Maintain accessible eyewash and emergency washing facilities.
Personal protection	Wear chemical-resistant gloves selected for the task, suitable protective clothing and splash goggles. Add face protection for splash-prone tasks.
Respiratory protection	Use a properly selected respirator under a respiratory-protection program where engineering controls do not adequately limit airborne exposure.
Hygiene	Wash after handling, remove contaminated clothing promptly and do not eat, drink or smoke in the work area.

9. Physical and Chemical Properties

Appearance	Colorless to pale yellow viscous liquid
Relative density at 20°C, reference	1.126
Flash point, reference, Cleveland open cup	190.5°C
Water response	Miscible
TEA component formula / molecular weight	C ₆ H ₁₅ NO ₃ / 149.19 g/mol

10. Stability and Reactivity

Stability	Handle and store under the recommended conditions. Prevent contamination and unnecessary heating.
Incompatibilities	Acids, strong oxidizers and nitrosating agents.
Decomposition	Fire or severe heating can generate carbon and nitrogen oxides.

11. Toxicological Information

Exposure effects	Eye injury, skin irritation and composition-dependent reproductive and repeated-exposure hazards require controls.
Reference classification	Skin irritation Category 2; serious eye damage Category 1; reproductive toxicity Category 2. The source label additionally reports repeated-exposure organ effects.
Toxicological data	The reference identifies serious eye damage, skin irritation and suspected reproductive harm; its label also reports repeated-exposure organ effects. Pure-TEA toxicity values do not certify the commercial mixture.

12. Ecological Information

Environmental effects	Prevent discharge of alkanolamine mixtures to drains and waterways. Collect spills and manage concentrated wastes through an authorized treatment route.
Controls	Prevent uncontrolled release, collect spills and dispose of contaminated material through an authorized route.
Assessment	No product-specific PBT/vPvB assessment is claimed. Absence of data does not establish absence of environmental effects.

13. Disposal Considerations

Product	Collect surplus product and contaminated cleanup material for disposal by an authorized chemical-waste contractor in accordance with local requirements.
Packaging	Containers may retain product residues. Do not reuse contaminated packaging without an approved cleaning process; use an authorized disposal route.

14. Transport Information

Classification	Non-dangerous goods
UN number	Not assigned for the non-dangerous-goods reference
Shipping name	Not regulated as dangerous goods
Class / packing group	ADR/RID, IMDG and IATA: not regulated as dangerous goods.
Transport precautions	Protect packaging and closures from damage, secure loads and prevent releases. This reference is not a shipping declaration for a specific consignment.

15. Regulatory Information

Identity	Triethanolamine 85%; CAS 102-71-6; EC 203-049-8
HS reference	292215; reference heading rather than a destination customs ruling.
Compliance	Apply applicable workplace, environmental and transport rules. A raw-material listing does not establish finished-product authorization.
Assessment	No ZXCHEM-specific chemical safety assessment or destination registration is asserted.

16. Other Information

Hazard meanings	H315: skin irritation. H318: serious eye damage. H361fd: suspected reproductive harm. H373: repeated-exposure organ harm reported on the source label.
Limitations	Prepared as reference safety information for the identified material. It is not a batch analytical certificate or safety assessment of a different solvent-containing formulation.
Revision	2026.2; prepared 2026-10-06. Customer-document branding and title corrected; technical safety data retained.
Document scope	Reference safety information for the material and grade described in Sections 1 and 3. Different concentrations, solvents or formulations require the applicable safety information. This is not a batch analytical certificate.

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