



Material Safety Data Sheet (MSDS) – Triethanolamine (TEA) 99%

Section 1: Identification of the Substance and Supplier

Parameter	Information
Product Name	Triethanolamine (TEA)
Synonyms	Trolamine, TEOA, Tris(2-hydroxyethyl)amine
CAS Number	102-71-6
EC Number	203-049-8
Molecular Formula	C ₆ H ₁₅ NO ₃
Molecular Weight	149.19 g/mol
Product Grade	Industrial Grade – 99%
Supplier	Basekim
Website	www.basekim.com
Recommended Uses	Cement additives, detergents, lubricants, coatings, metalworking fluids, chemical manufacturing
Emergency Telephone	Contact supplier for emergency information

Section 2: Hazards Identification

GHS Classification: Pure Triethanolamine generally does not meet the criteria for classification as hazardous under EU CLP Regulation (EC) No. 1272/2008.

Signal Word: None required.

Hazard Pictograms: None required.

Hazard Statements: None required under the referenced classification.

Potential Hazards

- Direct eye contact may cause temporary irritation.
- Repeated skin contact may cause mild irritation.
- Inhalation of heated mists may irritate the respiratory tract.
- Hot liquid may cause thermal burns.
- Combustion may produce harmful decomposition gases.



Section 3: Composition and Information on Ingredients

Component	CAS Number	Concentration
Triethanolamine	102-71-6	≥ 99.0%
Other Constituents	Varies	≤ 1.0%

The actual impurity profile depends on the manufacturing process and product batch.

Section 4: First Aid Measures

Inhalation

Move the affected person to fresh air. Keep the person comfortable and seek medical attention if respiratory symptoms continue.

Skin Contact

Remove contaminated clothing. Wash the affected area thoroughly with soap and water. Seek medical assistance if irritation develops or persists.

Eye Contact

Immediately rinse the eyes with clean water for at least 15 minutes. Remove contact lenses when possible. Continue rinsing and seek medical advice if irritation persists.

Ingestion

Rinse the mouth with water. Do not induce vomiting. Seek medical advice if symptoms occur or if the person swallows a significant amount.

Most Important Symptoms

Possible symptoms include eye irritation, skin discomfort, respiratory irritation from mists, and gastrointestinal discomfort following ingestion.

Section 5: Firefighting Measures

Parameter	Information
Flammability	Combustible at elevated temperatures
Flash Point	Approximately 179°C (closed cup)
Suitable Extinguishing Media	Water spray, foam, dry chemical, carbon dioxide



Hazardous Combustion Products	Carbon monoxide, carbon dioxide, nitrogen oxides
Firefighter Protection	Self-contained breathing apparatus and protective clothing

Firefighting Instructions

Use water spray to cool containers exposed to fire. Avoid directing strong water jets into spilled hot liquid.

Firefighters should wear appropriate protective equipment and prevent contaminated firefighting water from entering drains.

Section 6: Accidental Release Measures

Personal Precautions

- Restrict access to the contaminated area.
- Wear suitable chemical-resistant gloves and protective goggles.
- Avoid direct contact with the spilled chemical.
- Maintain adequate ventilation.
- Prevent slipping on contaminated surfaces.

Environmental Precautions

Prevent uncontrolled release into drains, surface water, groundwater, and soil.

Cleanup Procedures

Contain the spill using suitable absorbent materials such as sand or vermiculite.

Collect contaminated materials in properly labeled containers.

Clean the affected surface according to workplace procedures and local environmental requirements.

Section 7: Handling and Storage

Handling Precautions

Use suitable industrial handling equipment and follow good chemical hygiene practices.

Avoid unnecessary contact with skin and eyes. Prevent the formation and inhalation of airborne mists.



Keep containers closed when not in use.

Storage Conditions

- Store in a clean, dry, well-ventilated area.
- Keep containers tightly sealed.
- Protect against excessive heat.
- Avoid contamination and unnecessary moisture exposure.
- Separate from strong oxidizing agents and incompatible chemicals.
- Use compatible storage tanks and containers.

High-purity Triethanolamine may solidify near room temperature because its melting point is approximately 20–21°C.

Follow approved temperature-control procedures when heating or transferring the material.

Section 8: Exposure Controls and Personal Protection

Engineering Controls

Provide adequate workplace ventilation. Install local exhaust ventilation where processes generate heated vapors or aerosols.

Personal Protective Equipment

Protection Type	Recommendation
Eye Protection	Chemical splash goggles
Hand Protection	Chemically resistant gloves
Skin Protection	Protective clothing
Respiratory Protection	Suitable respiratory protection when ventilation cannot adequately control mist
Hygiene Measures	Wash hands after handling and before eating

Occupational Exposure Limits

Review applicable occupational exposure limits and workplace safety requirements for the operating jurisdiction.



Section 9: Physical and Chemical Properties

Property	Typical Value
Physical State	Viscous liquid near room temperature
Appearance	Colorless to pale yellow
Odor	Mild ammonia-like
Molecular Formula	$C_6H_{15}NO_3$
Molecular Weight	149.19 g/mol
Melting Point	Approximately 20–21°C
Boiling Point	Approximately 335°C
Flash Point	Approximately 179°C
Density at 20°C	Approximately 1.124–1.127 g/cm ³
Water Solubility	Completely miscible
Vapor Pressure	Very low at ambient temperature
Volatility	Low
pH	Alkaline in aqueous solution
Viscosity	High relative to water
Autoignition Temperature	Approximately 324°C
Explosive Properties	Not classified as explosive

These values represent typical properties of high-purity Triethanolamine. Actual values may vary according to purity and testing methods.

Section 10: Stability and Reactivity

Chemical Stability: Stable under recommended storage and handling conditions.

Reactivity: Reacts with acids through neutralization.

Conditions to Avoid: Excessive heat, contamination, and incompatible chemical contact.

Incompatible Materials: Strong oxidizing agents, strong acids, and certain reactive chemicals.

Hazardous Decomposition Products: Carbon oxides, nitrogen oxides, and irritating fumes may form during thermal decomposition.



Hazardous Polymerization: Not expected under normal conditions.

Section 11: Toxicological Information

Routes of Exposure

- Skin contact
- Eye contact
- Inhalation of airborne mist
- Accidental ingestion

Acute Toxicity

Available toxicological information generally does not support acute toxicity classification for pure Triethanolamine under the referenced EU CLP criteria.

Skin Irritation

Prolonged or repeated contact may cause skin irritation in susceptible individuals.

Eye Irritation

Direct contact may produce temporary irritation and discomfort.

Respiratory Effects

Exposure to concentrated airborne mists may irritate the respiratory tract.

Ingestion

Accidental ingestion may cause gastrointestinal discomfort.

Sensitization

Consult the current supplier SDS for a substance-specific sensitization assessment.

Chronic Exposure

Minimize unnecessary repeated exposure and follow established industrial hygiene procedures.



Carcinogenicity

Review the latest applicable regulatory assessments and product-specific SDS. This document does not establish a definitive carcinogenicity classification.

Section 12: Ecological Information

Ecotoxicity

Environmental effects depend on exposure concentration and receiving-water conditions.

Persistence and Degradability

Triethanolamine can undergo biological degradation under suitable environmental conditions.

Bioaccumulation

Significant bioaccumulation is generally not expected due to its high water solubility.

Mobility in Soil

The chemical may move through water-containing environmental systems.

Environmental Precautions

Avoid uncontrolled release into rivers, lakes, soil, and wastewater systems.

Follow local environmental protection and discharge regulations.

Section 13: Disposal Considerations

Dispose of unused chemicals, contaminated absorbents, and chemical packaging according to applicable waste-management regulations.

Do not discharge concentrated Triethanolamine directly into drains or natural waterways.

Use authorized waste-management services when necessary.

Empty containers may contain residues and require suitable cleaning or disposal procedures.



Section 14: Transport Information

Parameter	Classification
UN Number	Not assigned
UN Proper Shipping Name	Not applicable
Transport Hazard Class	Not regulated as dangerous goods
Packing Group	Not applicable
ADR/RID	Not regulated
IMDG	Not regulated
IATA	Not regulated
Marine Pollutant	Not generally classified

Transport classifications apply to the referenced pure substance. Confirm the current shipping SDS before dispatch, particularly for mixtures or formulated products.

Section 15: Regulatory Information

CAS Number: 102-71-6

EC Number: 203-049-8

EU REACH: Triethanolamine appears in European chemical registration records. Verify registration coverage for the relevant supply chain.

EU CLP Regulation: Pure Triethanolamine generally does not meet hazardous classification criteria under Regulation (EC) No. 1272/2008.

OSHA Hazard Communication: Employers and chemical suppliers should evaluate applicable hazard communication requirements.

Other Regulations: Follow relevant chemical inventory, environmental, workplace safety, and transport requirements for the destination country.



Section 16: Other Information

Parameter	Details
Document Title	Material Safety Data Sheet
Product Name	Triethanolamine (TEA)
Product Grade	99% Industrial
CAS Number	102-71-6
Supplier	Basekim
Website	www.basekim.com
Document Version	Draft 1.0
Preparation Date	18 October 2026
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Disclaimer

This document provides general technical and safety information for high-purity Triethanolamine.

Chemical properties, hazards, handling recommendations, and regulatory classifications may vary according to product purity, impurities, manufacturing conditions, and applicable legislation.

Users should consult the current manufacturer-issued Safety Data Sheet, Certificate of Analysis, and local regulations before handling, transporting, storing, or using this product.

Basekim must verify the information and add the required supplier identification, emergency contact details, and jurisdiction-specific regulatory information before issuing this document as an official Safety Data Sheet.