



Technical Data Sheet (TDS)

Triethanolamine (TEA) 99% – Industrial Grade

1. Product Identification

Parameter	Information
Product Name	Triethanolamine
Abbreviation	TEA / TEOA
Chemical Name	Tris(2-hydroxyethyl)amine
Synonym	Trolamine
CAS Number	102-71-6
EC Number	203-049-8
Molecular Formula	$C_6H_{15}NO_3$
Molecular Weight	149.19 g/mol
Chemical Family	Ethanolamines / Alkanolamines
Grade	Industrial Grade – 99%
Supplier	Basekim
Website	www.basekim.com

2. Product Description

Triethanolamine (TEA) is a versatile tertiary alkanolamine that manufacturers use as a neutralizing agent, pH regulator, chemical intermediate, and formulation additive.

High-purity TEA 99% typically appears as a clear, colorless to pale yellow, viscous liquid at temperatures above its melting point. It offers excellent water solubility, low volatility, and effective acid-neutralizing properties.

Industrial manufacturers commonly use TEA in cement grinding aids, metalworking fluids, detergents, coatings, textile chemicals, and selected specialty formulations.

3. Technical Specifications

Parameter	Typical Specification
Appearance	Clear, colorless to pale yellow viscous liquid
Triethanolamine Content	$\geq 99.0\%$
Water Content	$\leq 0.20\%$
Color (Pt-Co / APHA)	≤ 40



Density at 20°C	Approximately 1.124–1.127 g/cm ³
Molecular Weight	149.19 g/mol
Melting Point	Approximately 20–21°C
Boiling Point	Approximately 335°C
Flash Point	Approximately 179°C (closed cup)
Water Solubility	Completely miscible
Odor	Mild ammonia-like
Chemical Type	Tertiary alkanolamine

Note: These values represent typical high-purity TEA properties and illustrative commercial specifications. They are not certified Basekim batch limits. Confirm contractual specifications against the manufacturer's current TDS and Certificate of Analysis.

4. Physical and Chemical Properties

Property	Description
Physical Form	Viscous liquid above melting temperature
Color	Colorless to pale yellow
Water Compatibility	Fully miscible
Hygroscopicity	Absorbs atmospheric moisture
Volatility	Low at ambient temperatures
Alkalinity	Weak organic base
Acid Neutralization	Reacts with acids to form salts
Thermal Behavior	May decompose under excessive heating
Storage Stability	Stable under recommended conditions

5. Industrial Applications

Cement Grinding Aids

Manufacturers incorporate TEA into selected cement grinding aid formulations to influence particle dispersion, grinding efficiency, and cement hydration behavior.

Detergents and Cleaning Products

TEA acts as a neutralizing and pH-adjusting ingredient in industrial cleaning formulations, detergents, and specialty surfactant systems.



Metalworking Fluids

Formulators use TEA in water-based cutting fluids, machining lubricants, corrosion-control systems, and emulsifier formulations.

Coatings and Paints

The chemical supports alkalinity adjustment and neutralization in selected water-based coating formulations.

Textile Processing

Manufacturers use TEA in compatible textile auxiliaries, pH-adjustment systems, and specialty processing formulations.

Cosmetics and Personal Care

Suitable cosmetic-grade TEA supports pH adjustment and selected emulsification systems. Industrial-grade TEA 99% does not automatically meet cosmetic-grade purity and regulatory requirements.

Chemical Manufacturing

Producers use Triethanolamine as an intermediate for preparing specialty chemicals and selected organic salts.

6. Packaging Options

Packaging Type	Typical Arrangement
Steel Drums	Approximately 200 kg net
IBC Tanks	Capacity according to container specification
Bulk Tank	Subject to availability and transport requirements
ISO Tank	For suitable bulk shipment arrangements

Packaging availability, net weights, and container compatibility require confirmation before ordering.

7. Storage and Handling

- Store in clean, dry, tightly sealed containers.
- Keep the chemical away from strong oxidizing agents and incompatible materials.



- Prevent moisture absorption and contamination.
- Maintain suitable storage temperatures.
- Use appropriate personal protective equipment.
- Provide adequate ventilation during handling.
- Follow the current product Safety Data Sheet.

High-purity Triethanolamine may solidify near 20–21°C. Apply controlled heating only in accordance with the manufacturer's handling instructions.

8. Shelf Life

Shelf Life: Confirm the manufacturer's recommended shelf life or retest period for the supplied batch.

Product stability depends on packaging integrity, storage temperature, moisture exposure, and contamination control.

9. Quality Control

Manufacturers and industrial buyers should evaluate the following parameters when applicable:

- Triethanolamine purity
- Water content
- Color
- Appearance
- Related ethanolamine impurities
- Batch consistency

The manufacturer should provide a Certificate of Analysis showing the actual tested values and applicable test methods.

10. Safety Information

Triethanolamine requires proper industrial chemical handling procedures.

Avoid unnecessary contact with the eyes and skin. Use suitable chemical-resistant gloves, protective eyewear, and appropriate workplace ventilation.

Consult the current Safety Data Sheet for complete information about exposure controls, first aid, accidental release, firefighting, and disposal.



11. Commercial Information

Parameter	Information
Product	Triethanolamine (TEA)
Grade	99% Industrial
Supply Type	Commercial and bulk industrial supply
Minimum Order Quantity	Upon inquiry
Packaging	Drums, IBC, or bulk options subject to confirmation
Price	Available upon quotation
Technical Documents	TDS, SDS, and batch COA upon availability
Supplier	Basekim
Website	www.basekim.com

12. Disclaimer

This Technical Data Sheet provides representative information about Triethanolamine 99% for industrial product evaluation.

The listed properties and specifications may vary according to manufacturer, production process, and batch.

This document does not constitute a certified product specification, quality guarantee, or Certificate of Analysis. Buyers should verify the actual product specifications, test methods, packaging conditions, and application suitability before purchasing or using the chemical.