TECHNICAL DATA SHEET

Trichloroethylene (TCE) Technical Grade

Revised: 02/20/2026

PRODUCT IDENTIFICATION

Product Name: Trichloroethylene (TCE) Technical Grade
CAS Number: 79-01-6
Molecular Formula: C_2HCl_3
Molecular Weight: 131.38 g/mol
Grade: Technical Grade
Purity / Concentration: Not Available
Synonyms: Trichloroethene, TCE

PRODUCT OVERVIEW

Trichloroethylene (TCE) Technical Grade from Alliance Chemical is a clear, volatile liquid with a purity of 99.4% and a specific gravity of 1.464 g/mL. This grade is primarily used for cleaning and degreasing metal parts in manufacturing, offering reliable performance in demanding industrial applications. Its solvent properties also make it valuable in adhesive and coating formulations.

Grade Significance: Technical Grade Trichloroethylene (TCE) indicates a level of purity suitable for industrial applications where high purity is not strictly required but reliable performance is still necessary. While not as pure as reagent grades, Technical Grade TCE offers a cost-effective solution for many cleaning, degreasing, and solvent applications.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (wt%)	%	99.4	99	—	Gas Chromatography (GC)
Color (APHA)	APHA	5	—	10	ASTM D1209
Specific Gravity (20°C)	g/mL	1.464	1.46	1.47	ASTM D4052
Residue After Ignition	%	0.0005	—	0.0010	Gravimetric
Water Content	%	0.01	—	0.05	Karl Fischer Titration
Heavy Metals (as Pb)	ppm	0.05	—	1	ICP-OES
Chloride (Cl^-)	ppm	0.1	—	1	Ion Chromatography (IC)
Acidity As Hcl	ppm	1	—	5	Titration
Stabilizer Ppm	ppm	50	30	70	Gas Chromatography (GC)

ND = Not Detected. Values are typical and may vary by lot.

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Clear volatile liquid	**Odor**	Sweet, chloroform-like odor
Form	Liquid	**Boiling Point**	87°C (189°F)
Melting / Freezing Point	'-73°C	**Flash Point**	Non-flammable
Specific Gravity	1.46	**Solubility**	Low water solubility, excellent organic solvent
Molecular Formula	C_2HCl_3	**Molecular Weight**	131.38 g/mol
Vapor Pressure (20°C)	74 mmHg	**Viscosity (25°C)**	0.89 cP
Refractive Index (20°C)	1.466	**Density (25°C)**	1.463 g/mL

APPLICATIONS

1. **Manufacturing** — Used extensively for cleaning and degreasing metal parts, removing oils, greases, and other contaminants to prepare surfaces for further processing or finishing. TCE's strong solvency ensures effective removal of stubborn residues, enhancing the quality and durability of manufactured goods.
2. **Adhesives and Coatings** — Acts as a solvent in the formulation of adhesives and coatings, providing the necessary viscosity and solvency for proper application and adhesion. Its ability to dissolve various resins and polymers makes it a crucial component in achieving desired coating properties.
3. **Laboratory** — Utilized in the extraction of various compounds in laboratory settings, separating target substances from complex mixtures. TCE's properties allow for efficient extraction, facilitating research and analysis in diverse scientific fields.
4. **Pharmaceuticals** — Serves as an intermediate in the synthesis of various pharmaceuticals, contributing to the production of life-saving medications. Its role in chemical reactions and purification processes is essential for creating high-quality pharmaceutical products.
5. **Textile Industry** — Used in the textile industry for scouring and finishing fabrics, removing waxes, oils, and other impurities to improve texture and appearance. TCE's solvency helps to prepare textiles for dyeing and printing processes, enhancing the overall quality of the finished product.
6. **Electronics** — Employed in the electronics industry for cleaning circuit boards and electronic components, ensuring optimal performance and reliability. TCE effectively removes flux residues and other contaminants that can interfere with electrical conductivity.

STORAGE & HANDLING

Proper storage of Trichloroethylene (TCE) Technical Grade is crucial to maintain its stability and prevent degradation. Exposure to light, heat, or moisture can compromise its purity and potentially lead to the formation of hazardous byproducts. Given TCE can cause skin and eye irritation and drowsiness or dizziness, storing it in a cool, dry, and well-ventilated area away from incompatible materials is essential for safety.

- Store in a cool, well-ventilated area away from heat sources.
- Use materials compatible with TCE, such as HDPE or glass containers.
- Avoid contact with strong oxidizing agents and acids.
- Ensure proper PPE is worn, including gloves and goggles, when handling.
- Keep containers tightly closed to prevent evaporation and contamination.

AVAILABLE PACKAGING

- 1 Quart
- 1 Gallon
- 5 Gallon
- 55 Gallon

SAFETY SUMMARY (CROSS-REFERENCE TO SDS)

Signal Word: Danger

Hazard Statements:

- H315: Causes skin irritation [Warning Skin corrosion/irritation]
- H319: Causes serious eye irritation [Warning Serious eye damage/eye irritation]
- H336: May cause drowsiness or dizziness [Warning Specific target organ toxicity, single exposure; Narcotic effects]
- H341: Suspected of causing genetic defects [Warning Germ cell mutagenicity]
- H350: May cause cancer [Danger Carcinogenicity]
- H412: Harmful to aquatic life with long lasting effects [Hazardous to the aquatic environment, long-term hazard]

Emergency Contact: CHEMTEL - 800-255-3924 (24 Hours/Day, 7 Days/Week)

For complete safety information, refer to the Safety Data Sheet (SDS) for this product.

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