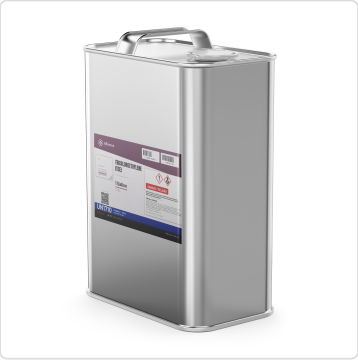
TECHNICAL DATA SHEET

Trichloroethylene (TCE) ACS Grade

Revised: 08/11/2026

PRODUCT IDENTIFICATION



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

PRODUCT OVERVIEW

Trichloroethylene (TCE) ACS Grade is a high-purity, colorless volatile liquid featuring a minimum assay of 99.7% and strictly controlled impurities like residue at 3 ppm. This professional-grade solvent is essential for precision cleaning, chemical synthesis, and rigorous analytical laboratory applications.

Grade Significance: ACS Grade signifies that this product meets the rigorous specifications set by the American Chemical Society, ensuring the consistency and purity required for high-stakes laboratory and analytical work.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay Gc Fid	%	99.7	99.5	100.5	GC-FID
Color (APHA)	APHA	5	—	10	ASTM D1209
Specific Gravity (20°C)	g/mL	1.467	1.459	1.47	Hydrometer @ 20°C
Residue On Evaporation	ppm	3	—	10	Evaporation
Water Karl Fischer	%	0.0087	—	0.01	ASTM E203 / ISO 6296
Acidity As Acetic	ppm	1.5	—	5	Titration

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

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Colorless volatile liquid	**Odor**	Sweet, chloroform-like odor
Form	Liquid	**Boiling Point**	189 °F at 760 mmHg (NTP, 1992)
Melting / Freezing Point	-99 °F (NTP, 1992)	**Flash Point**	greater than 200 °F (NTP, 1992)
Specific Gravity	1.46	**Solubility**	Soluble in water, alcohol, ether, and organic solvents
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)	1.463	**Density (25°C)**	1.463 g/mL
Decomposition Temp.	Decomposes on prolonged heating; not stable above ~100°C		

APPLICATIONS

1. **Manufacturing** — Widely used for heavy-duty degreasing and cleaning of metal components to ensure surfaces are free of contaminants before further processing.
2. **Chemical Synthesis** — Acts as a reliable solvent in complex chemical synthesis pathways where high purity is required to prevent reaction interference.
3. **Analytical Chemistry** — Utilized as a solvent in chromatography and other sensitive analytical techniques due to its low residue profile.
4. **Fluorochemical Production** — Serves as a critical precursor for the synthesis of various fluorinated compounds used in industrial and consumer goods.
5. **Extraction Processes** — Employed in various extraction applications where its specific solvent properties facilitate efficient separation of compounds.

STORAGE & HANDLING

Proper storage is critical because TCE is a volatile liquid that can pose inhalation risks and cause dizziness if containers are not sealed tightly. Keeping the chemical in a cool, well-ventilated area away from heat sources is necessary to manage its specific gravity and prevent degradation, ensuring the safety of your facility personnel.

- Store in a cool, well-ventilated area away from heat sources.
- Use containers made of HDPE or glass to prevent chemical reactions.
- Avoid contact with strong oxidizing agents and acids.
- Keep away from direct sunlight to prevent degradation.
- Use appropriate personal protective equipment (PPE) including gloves and goggles.

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
- H319: Causes serious eye irritation
- H336: May cause drowsiness or dizziness
- H341: Suspected of causing genetic defects
- H350: May cause cancer
- H412: Harmful to aquatic life with long lasting effects

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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