

PRODUCT IDENTIFICATION



Product Name: Perchloroethylene ACS Grade

CAS Number: 127-18-4

Molecular Formula: C₂Cl₄

Molecular Weight: 165.8 g/mol

Grade: ACS Grade

Purity / Concentration: Not Available

Synonyms: Tetrachloroethylene, PERC

PRODUCT OVERVIEW

Perchloroethylene ACS Grade is a high-purity, colorless volatile liquid featuring an assay of 99.95% and extremely low impurity levels. It is a highly effective solvent primarily utilized in industrial cleaning, precision degreasing, and chemical synthesis applications.

Grade Significance: ACS Grade signifies that this product meets the rigorous purity standards set by the American Chemical Society, ensuring consistent performance for sensitive laboratory and industrial processes.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay Gc Fid	%	100.0	99.5	100.5	GC-FID
Color (APHA)	APHA	4	—	10	ASTM D1209
Specific Gravity (20°C)	g/mL	1.6193	—	—	Hydrometer @ 25°C
Residue On Evaporation	ppm	3	—	10	Evaporation
Water Karl Fischer	%	0.0015	—	0.0050	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	250 °F at 760 mmHg (NTP, 1992)
Melting / Freezing Point	-2 °F (NTP, 1992)	Flash Point	No flash point in conventional closed tester.
Specific Gravity	1.623	Solubility	Soluble in organic solvents, insoluble in water
Molecular Formula	C ₂ Cl ₄	Molecular Weight	165.8 g/mol
Vapor Pressure (20°C)	9.5 mmHg	Viscosity (25°C)	0.89 cP
Refractive Index (20°C)	1.461	Density (25°C)	1.622 g/mL
Partition Coefficient (log P)	2.8	Decomposition Temp.	Not normally decompose at ambient; decompose at high temps, >200°C under oxidative conditions

APPLICATIONS

1. **Dry Cleaning** — Widely used as the industry-standard solvent for effectively removing stains and soils from delicate fabrics.
2. **Automotive Manufacturing** — Utilized for precision cleaning and degreasing of metal parts to ensure surfaces are free of contaminants before assembly or coating.
3. **Adhesives and Sealants** — Serves as a critical solvent in the formulation of high-performance adhesives and sealants for industrial applications.
4. **Chemical Synthesis** — Acts as a versatile precursor in the synthesis of various fluorinated compounds and specialty chemical intermediates.

STORAGE & HANDLING

Perchloroethylene must be stored in a cool, well-ventilated area away from direct sunlight to prevent degradation and minimize vapor buildup. Proper containment is essential to mitigate health risks, as the chemical is classified as a suspected carcinogen and poses long-term toxicity to aquatic environments.

- Store in a cool, dry, well-ventilated area away from incompatible materials.
- Use containers made of HDPE or glass to prevent chemical reactions.
- Avoid exposure to light and heat to maintain chemical stability.
- Use appropriate personal protective equipment (PPE) including gloves and goggles during handling.
- Ensure proper ventilation in work areas to minimize inhalation exposure.

AVAILABLE PACKAGING

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

SAFETY SUMMARY (CROSS-REFERENCE TO SDS)

Signal Word: **Warning**



Hazard Statements:

- H351: Suspected of causing cancer [Warning Carcinogenicity]
- H411: Toxic 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.

Alliance Chemical | 204 South Edmond St, Taylor, Texas 76574 | 512-365-6838 | www.alliancechemical.com

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