

PRODUCT IDENTIFICATION



Product Name: Perchloroethylene (PCE, PERC)

CAS Number: 127-18-4

Molecular Formula: C₂Cl₄

Molecular Weight: 165.8 g/mol

Grade: Technical

Purity / Concentration: 100%

Synonyms: Tetrachloroethylene, PERC

PRODUCT OVERVIEW

Perchloroethylene (PCE) is a colorless, volatile liquid with a sweet odor, primarily used as a solvent in dry cleaning and degreasing applications. It is a non-flammable organic compound with excellent solvent properties for a wide range of organic materials.

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	—	15	ASTM D1209
Specific Gravity (20°C)	g/mL	1.6193	—	—	Hydrometer @ 25°C
Water Karl Fischer	%	0.0015	—	0.01	ASTM E203 / ISO 6296
Acidity As Acetic	ppm	3	—	10	Titration

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

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Colorless liquid with a mild, sweet odor	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	Slightly soluble in water, soluble in organic solvents
Molecular Formula	C ₂ Cl ₄	Molecular Weight	165.8 g/mol
Vapor Pressure (20°C)	8 mmHg	Viscosity (25°C)	0.89 cP
Refractive Index (20°C)	1.462	Density (25°C)	1.622 g/mL
Decomposition Temp.	Not readily decomposed; decomposes on strong heating		

APPLICATIONS

1. **Textile** — Widely used in the dry cleaning industry for its effective stain removal properties.
2. **Manufacturing** — Utilized for cleaning metal parts and machinery due to its strong solvent capabilities.
3. **Chemical Manufacturing** — Serves as a precursor in the synthesis of various chemicals and solvents.
4. **Research Laboratory** — Commonly employed in laboratories for extraction and chromatography applications.
5. **Construction** — Used in the formulation of adhesives and sealants for improved performance.

STORAGE & HANDLING

- Store in a cool, dry place away from heat sources and direct sunlight.
- Use containers made of HDPE or glass to prevent chemical reactions.
- Avoid contact with strong oxidizing agents and acids.
- Ensure proper ventilation when handling to minimize inhalation exposure.
- Wear 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: **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.

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