

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Perchloroethylene ACS Grade

Synonyms: 1,1,2,2-tetrachloroethene, Perchloroethylene

CAS Number: 127-18-4

Grade/Purity: ACS Reagent Grade

Product Type: Solvents

Product Use: Industrial, Manufacturing or Laboratory use

Manufacturer/Supplier: Alliance Chemical, 204 South Edmond St, Taylor, Texas 76574

Information: 512-365-6838 | www.alliancechemical.com

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

2. HAZARDS IDENTIFICATION

Signal Word: Danger

GHS Pictograms:



Hazard Statements:

H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H336	May cause drowsiness or dizziness
H351	Suspected of causing cancer
H370	Causes damage to organs
H373	May cause damage to organs through prolonged or repeated exposure
H411	Toxic to aquatic life with long lasting effects

Precautionary Statements:

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust, fume, gas, mist, vapours or spray.
P264	Wash hands and face thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P273	Avoid release to the environment.
P280	Wear protective gloves, protective clothing, and eye/face protection.
P281	Use personal protective equipment as required.
P308+P311	IF exposed or concerned: Call a POISON CENTER or doctor.
P308+P313	IF exposed or concerned: Get medical advice or attention.
P314	Get medical advice or attention if you feel unwell.
P391	Collect spillage.

P405	Store locked up.
P501	Dispose of contents and container in accordance with local, regional, national, and international regulations.

3. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	% MIN	% MAX	CAS #	EINECS# / ELINCS#	FORMULA	MOLECULAR WEIGHT
Perchloroethylene	99.5	100.5	127-18-4	204-825-9	C ₂ Cl ₄	165.8 g/mol

4. FIRST-AID MEASURES

Eyes	Rinse with plenty of water for at least 15 minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek medical attention immediately.
Skin	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing. Wash with soap. Get medical attention immediately.
Inhalation	Move person to fresh air and keep comfortable for breathing. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately.
Ingestion	Do Not Induce Vomiting! Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention immediately.

5. FIRE-FIGHTING MEASURES

Suitable Media	Use water spray, alcohol-resistant foam, dry chemical, or CO ₂ . Use measures appropriate to local circumstances.
Unsuitable Media	Do not use a solid water stream as it may scatter and spread fire.
Protective Equipment	Wear self-contained breathing apparatus and full protective clothing.
Combustion Products	May include carbon oxides and other toxic fumes. See Section 10.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Use PPE as described in Section 8. Ensure adequate ventilation. Evacuate personnel to safe areas.
Environmental	Prevent leakage or spillage from entering drains, sewers, or waterways.
Containment & Cleanup	Absorb with inert material. Collect in appropriate waste container. Dispose per applicable regulations.

7. HANDLING AND STORAGE

Safe Handling	Use with adequate ventilation. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Keep container closed when not in use.
Safe Storage	Store in a cool, dry, well-ventilated area. Keep away from incompatible materials (see Section 10). Keep containers tightly closed.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Use adequate ventilation. Provide eyewash stations and quick-drench showers accessible to areas of use.

Occupational Exposure Limits:

AGENCY	EXPOSURE LIMIT
OSHA PEL	100 ppm TWA / 200 ppm acceptable ceiling / 300 ppm 5-min peak
NIOSH REL	Ca (carcinogen — minimize occupational exposure)
IDLH	150 ppm

Eyes	Wear chemical safety goggles or face shield.
Skin	Wear chemical-resistant gloves and protective clothing.
Inhalation	Use NIOSH-approved respirator if exposure limits are exceeded or irritation occurs.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Colorless, volatile liquid
Odor	Ether-like odor
Particle Characteristics	Not Applicable
pH	Not Available
Melting Point	-2 °F (NTP, 1992)
Boiling Point	250 °F at 760 mmHg (NTP, 1992)
Flash Point	No flash point in conventional closed tester.
Vapor Pressure	14 mmHg at 68 °F ; 15.8 mmHg at 72 °F (NTP, 1992)
Specific Gravity	1.623
Solubility	Soluble in organic solvents, insoluble in water
Molecular Formula	C ₂ Cl ₄
Molecular Weight	165.8 g/mol

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under recommended storage conditions.
Hazardous Reactions	None under normal processing conditions.
Conditions to Avoid	Heat, sparks, open flame, and incompatible materials.
Incompatible Materials	Strong oxidizing agents, strong acids, strong bases.
Decomposition Products	May produce carbon oxides and other toxic fumes when heated to decomposition.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity: See Section 2 for GHS hazard classification.

IARC	Group 2A — probably carcinogenic to humans (Tetrachloroethylene (perchloroethylene); IARC agent: Tetrachloroethylene (Perchloroethylene), Vol. Sup 7, 63, 106).
NTP	Reasonably anticipated to be a human carcinogen (Tetrachloroethylene (perchloroethylene); NTP listing: Tetrachloroethylene).
OSHA	No substance-specific standard in 29 CFR 1910 Subpart Z; classified as a carcinogen under the Hazard Communication Standard (29 CFR 1910.1200). See Section 2.

12. ECOLOGICAL INFORMATION

Ecotoxicity	Daphnia EC50: 18 mg/L (48 h, Daphnia magna (static, 22 °C)); Fish LC50: 5 mg/L (96 h, Limanda limanda (dab; range across species 5–8.4 mg/L))
Persistence	Persistent — Slow/no aerobic biodegradation (half-life ~180 d aerobic)
Bioaccumulation	log Kow 3.40, BCF 26–115 (measured in fish)
Mobility in Soil	Adsorbs to solids/sediment (measured Koc 200–237)

13. DISPOSAL CONSIDERATIONS

Dispose of contents/container in accordance with applicable federal, state, and local regulations. Do not dispose of into drains or waterways.

14. TRANSPORT INFORMATION

US DOT	UN1897, Tetrachloroethylene, 6.1, PG III
IMDG	UN1897, Tetrachloroethylene, 6.1, PG III
IATA/ICAO	UN1897, Tetrachloroethylene, 6.1, PG III
Marine Pollutant	No

15. REGULATORY INFORMATION

TSCA Inventory	Listed.
SARA 313 (TRI)	Listed (de minimis 0.1%).
California Prop 65	Listed (cancer).
SARA 311/312	See Section 2 for hazard classifications.

Data retrieved as of — TSCA Inventory: 2026-09-02; SARA 313 (TRI): 2026-09-02; California Prop 65: 2026-09-02

16. OTHER INFORMATION

Revision Date: 09/21/2026

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