

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Perchloroethylene (PCE, PERC)

Synonyms: TETRACHLOROETHYLENE, Tetrachloroethene, Perchloroethylene, Tetrachlorethylene, Perc

CAS Number: 127-18-4

Grade/Purity: Technical

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: Warning

GHS Pictograms:



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]

Precautionary Statements:

P203,	P273, P280, P318, P391, P405, and P501
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3. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	CAS #	FORMULA	MOLECULAR WEIGHT	CONCENTRATION
TETRACHLOROETHYLENE	127-18-4	C ₂ Cl ₄	165.83 g/mol	100%

4. FIRST-AID MEASURES

Eyes	EYES: First check the victim for contact lenses and remove if present. Flush victim's eyes with water or normal saline solution for 20 to 30 minutes while simultaneously calling a hospital or poison control center. Do not put any ointments, oils, or medication in the victim's eyes without specific instructions from a physician. IMMEDIATELY transport the victim after flushing eyes to a hospital even if no symptoms (such as redness or irritation) develop.
Skin	Remove contaminated clothes. Rinse and then wash skin with water and soap.
Inhalation	INHALATION: IMMEDIATELY leave the contaminated area; take deep breaths of fresh air. IMMEDIATELY call a physician and be prepared to transport the victim to a hospital even if no symptoms (such as wheezing, coughing, shortness of breath, or burning in the mouth, throat, or chest) develop. Provide proper respiratory protection to rescuers entering an unknown atmosphere. Whenever possible, Self-Contained Breathing Apparatus (SCBA) should be used; if not available, use a level of protection greater than or equal to that advised under Protective Clothing.
Ingestion	INGESTION: DO NOT INDUCE VOMITING. Corrosive chemicals will destroy the membranes of the mouth, throat, and esophagus and, in addition, have a high risk of being aspirated into the victim's lungs during vomiting which increases the medical problems. If the victim is conscious and not convulsing, give 1 or 2 glasses of water to dilute the chemical and IMMEDIATELY call a hospital or poison control center. IMMEDIATELY transport the victim to a hospital. If the victim is convulsing or unconscious, do not give anything by mouth, ensure that the victim's airway is open and lay the victim on his/her side with the head lower than the body. DO NOT INDUCE VOMITING. Transport the victim IMMEDIATELY to a hospital.

5. FIRE-FIGHTING MEASURES

Suitable Media	Use water spray, alcohol-resistant foam, dry chemical, or CO2. 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: PERCHLOROETHYLENE decomposes upon heating and exposure to UV light to give phosgene and HCl. Reacts . 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	100.0 [ppm], Ceiling(OSHA) = 200 ppm(300 ppm is 5-min peak in any 3 hrs)
NIOSH REL	Ca Minimize workplace exposure concentrations. See Appendix A
IDLH	150.0 [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 liquid with a mild, sweet odor
Odor	Ether-like odor
pH	Not Available
Melting Point	-22°C (-8°F)
Boiling Point	121°C (250°F)
Flash Point	Not Available
Vapor Pressure	14 mmHg at 68 °F ; 15.8 mmHg at 72 °F (NTP, 1992)
Specific Gravity	1.623
Solubility	Slightly soluble in water, soluble in organic solvents
Molecular Formula	C ₂ Cl ₄
Molecular Weight	165.83 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	PERCHLOROETHYLENE decomposes upon heating and exposure to UV light to give phosgene and HCl. Reacts violently with finely dispersed light metals (aluminum) and zinc. [Handling Chemicals Safely 1980 p.
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	Not listed as carcinogen.
NTP	Not listed as carcinogen.
OSHA	Not listed as carcinogen.

12. ECOLOGICAL INFORMATION

Ecotoxicity	Fish LC50: LC50; Species: <i>Jordanella floridae</i> (American flagfish); Concentration: 8.4 mg/L for 96 hr / Conditions of bioassay not specified in source examined/; Daphnia EC50: LC50; Species: <i>Daphnia magna</i> (water flea); Conditions: static bioassay, 22 °C; Concentration: 18 mg/L for 48 hr [PubChem]
Persistence	Not Available
Bioaccumulation	Not Available
Mobility in Soil	Not Available

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, Tunnel (E)
IATA/ICAO	UN1897, TETRACHLOROETHYLENE, 6.1, PG III Passenger: 30 L (PI 655); Cargo only: 30 L (PI 663)
Marine Pollutant	No

15. REGULATORY INFORMATION

TSCA Inventory	All ingredients are listed on the TSCA Active inventory.
California Prop 65	Refer to California Proposition 65 list for current status.
SARA 311/312	See Section 2 for hazard classifications.
SARA 313	Refer to EPA Toxic Release Inventory for current listing status.

16. OTHER INFORMATION

Revision Date: 02/10/2026

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