



MATERIAL SAFETY DATA SHEET

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Company Address:

5301 Keystone Ct,
Rolling Meadows, IL 60008

Tel: 1-847-253-8868

Fax: 1-847-253-8877

Product Name: PERC, Perchloroethylene

Chemical Name: Tetrachloroethylene (Perchloroethylene)

CAS No: 127-18-4

Emergency: (CHEMTREC) 800-424-9300

Revision Date: April 8, 2013

SECTION 2 – COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS #	ACGIH TLV	OSHA PEL	Other Limits	Wt. %
Tetrachloroethylene	127-18-4	25 ppm	100 ppm	300 ppm ST	99

SECTION 3 – HAZARDS IDENTIFICATION

Emergency Overview:

Potential Health Effects:

Primary Entry Routes: inhalation, dermal, ingestion are the primary routes of entry, although other avenues should be considered.

Target Organs:

Eye: Eye irritant, mildly irritating to the skin.

Skin: Prolonged exposure involving the skin may cause dermatitis.

Ingestion: Mildly toxic. Aspiration due to vomiting may lead to chemical pneumonia and pulmonary edema which is a potentially fatal condition. Swallowing material may cause irritation to the mouth and upper respiratory tract along with other effects noted under inhalation.

Inhalation: Moderately toxic, perchloroethylene is a central nervous system depressant and can cause possible central nervous system damage with overexposure. May cause irritation of the upper respiratory tract. Fatalities following severe acute exposure to various chlorinated solvents have been attributed to ventricular fibrillation.

Chronic: Prolonged exposure above the OSHA permissible exposure limits may result in liver and kidney damage.

SECTION 4 – FIRST AID MEASURES

Eyes: Flush eyes with copious amounts of water for at least 15 minutes.

Skin: Wash skin with soap and water for at least 15 minutes. Remove all contaminated clothing and laundry prior to reuse. Properly discard all leather articles which are soaked with product.

Ingestion: Seek medical attention immediately! If conscious, drink large amounts of water, do not induce vomiting. Never administer anything by mouth to an unconscious person. If vomiting occurs spontaneously keep individual's head below their hips to prevent aspiration of material into the lungs.

Inhalation: Remove individual to fresh air. If breathing is difficult provide oxygen. If not breathing, give artificial respiration, preferably mouth-to-mouth.

Notes to Physician: Never administer adrenalin following perchloroethylene overexposure. Increased sensitivity of the heart to adrenalin may be caused by overexposure to Detrex perk.

SECTION 5 – FIRE FIGHTING MEASURES

Flash Point: None

LEL: None

UEL: None

Extinguishing Media: Use water, dry chemical or carbon dioxide.

Fire-Fighting Instructions: Firefighters should wear NIOSH/MSHA approved positive pressure self-contained breathing apparatus for possible exposure to toxic by-products of combustion as denoted in section v. water may be used to keep containers cool.

Unusual firefighting procedures: This product may decompose when it comes in contact with open flames, heating elements, electrical arcs (such as electrical motors) or combustion engines. Due to vapor density ignition sources distant from areas of handling material need to be considered.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spills / Leak Procedures: Immediately evacuate the area and provide maximum ventilation. Unprotected personnel should move upwind of the spill. Only personnel equipped with proper respiratory and skin/eye protection should be permitted in the area. Dike area to contain the spill. Take precautions as necessary to prevent contamination of the ground and surface waters. Recover spilled material on absorbents, such as sawdust or vermiculite, and sweep into closed containers for disposal. After all visible traces, including vapors, have been removed, thoroughly wet vacuum the area. Do not flush to the sewer. If area is porous, remove as much earth and gravel, etc., as necessary and place in closed containers for disposal.

SECTION 7 – HANDLING AND STORAGE

Handling Precautions:

Do not use in poorly ventilated or confined spaces without proper respiratory protection.

Store only in closed, properly labeled containers when not in use. This material or its vapors when in contact with flames, hot glowing surfaces or electric arcs can decompose to form hydrogen chloride,



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OTHER PRECAUTIONS: chlorine, and other toxic compounds. Do not use cutting or welding torches on drums that contained product unless properly purged and cleaned.
Do not breathe vapors. High concentrations can cause dizziness, unconsciousness, or death in extreme cases. Ventilation must be sufficient to limit employees' exposure. Avoid contact with eyes or skin; do not ingest. Do not eat, drink or smoke in work areas.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical Name	OSHA PEL	ACGIH TLV	NTP	IARC	SARA313	SUBPART Z
Tetrachloroethylene	100 ppm	25 ppm, 50 mg/m ³ TWA	Y	Y	Y	Y

Ventilation Requirements: Use local ventilation or dilution as appropriate to control exposures to below permissible limits.
Respiratory Protection: To limit employees' exposure, OSHA requires that the use of administrative or engineering controls must first be developed and implemented whenever feasible (29 CFR 1910.1000(e)). When controls are not feasible then protective equipment, such as respirators, may be used. Half or full face respirators in conjunction with the proper chemical cartridge may be used when conditions do not exceed permissible limits.

Personal Protective Equipment

Eye/Face: Splash proof goggles.
Special/Other: Eyewash and safety showers should be available in areas where this product is handled.
Skin: Protect all exposed skin from liquid contact. Use synthetic gloves such as viton, polyvinyl alcohol (degrades in water), or nitrile (for limited service). Aprons should be used when there is a chance for splashing.
Respirators: Positive pressure, self-contained units (SCBAS) are required whenever: there is insufficient oxygen, poorly ventilated rooms, conditions are IDLH, or when exposure is above the PEL, and some confined-space conditions. Use only OSHA/NIOSH approved respirators according to the manufacturer's directions and the provisions under 29 CFR 1910.134.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical State: liquid	Solubility: 0.015% @ 25 °C
Appearance: clear, colorless	Vapor Pressure: ≥ 14.2 @ 22 °C
Odor: ether-like odor	Vapor Density: ≥ 5.83 (air=1)
pH: 6.8 - 8.4	Specifics Gravity/Density: 1.63 g/cm ³
Evaporation Rate: ≥ 0.09	% Volatile by Volume: 100
Boiling Point: ≥ 121 °C/ 250 °F (at 760 mm Hg)	Molecular Formula: CCl ₂ =CCl ₂
Freezing/Melting Point: ≥ -23.4 °C	Molecular Weight: 165.83 g/mol

SECTION 10 – STABILITY AND REACTIVITY

Chemical Stability: Stable
Conditions to Avoid: avoid contact with open flames, electric arcs, or other sources of ignition.
Incompatibilities with Other Materials: avoid contamination with caustic soda, caustic potash, and oxidizers. Shock sensitive materials may be formed. Also avoid contact with barium, lithium, beryllium, and N₂O₄.
Hazardous Decomposition Products: decomposition by-products include chlorine, hydrogen chloride, carbon monoxide, carbon dioxide, and possible traces of phosgene.
Hazardous Polymerization: will not occur

SECTION 11 – TOXICOLOGICAL INFORMATION

LD₅₀ (ORAL-RAT): 34,200 mg/m³ / 8hr.
LD₅₀ (DERMAL-RABBIT): N/D
LC₅₀ (INHALATION-RAT): 2629 mg/Kg
AQUATIC LIFE (TOXICITY): LC50 (FISH) 96 HR. TLM 100-10 ppm

SECTION 12 – ECOLOGICAL INFORMATION

Toxic to aquatic organisms, may cause long-term adverse effects to the aquatic environment. Chlorinated solvents have a relatively short life-time in the atmosphere. If spilt into water or soil, trichloroethylene will usually evaporate into the air, where it is quickly broken down. Perchloroethylene displays very slow biodegradation and responsible end-users will be very careful to avoid spillages.

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste Disposal Method:
Contaminated sawdust, vermiculite or porous surface must be disposed of in a permitted hazardous waste management facility. Recovered liquids may be reprocessed or incinerated, or must be treated in a permitted hazardous waste management facility. Care must be taken when using or disposing of chemical materials and/or their containers in accordance with the clean air act, the clean water act, the resource conservation and recovery act, the department of transportation, as well as any other relevant federal, state, or local laws/regulations regarding disposal.

SECTION 14 – TRANSPORT INFORMATION

DOT Information:
Proper shipping name: Tetrachloroethylene
Hazard class: 6.1
Identification number: UN 1897
Packing group: PG III
Labels: keep away from food (6.1)



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Other: marine pollutant

SECTION 15 – REGULATORY INFORMATION

Material is regulated under section 313 of SARA iii.

Material may trigger reporting requirements under section 311/312 of SARA iii.

Material is registered under TSCA inventory.

Toxic to aquatic organisms

Perk is listed in 40 CFR 302.4 as a hazardous substance.

Code	HMIS
Health	2
Flammability	0
Reactivity	0
Personal Protection	H

SECTION 16 – OTHER INFORMATION

Do not use in poorly ventilated or confined-spaces without proper respiratory protection.

This material or its vapors when in contact with flames, hot glowing surfaces or electric arcs can decompose to form hydrogen chloride, chlorine, carbon dioxide, carbon monoxide, and other toxic by-products including possibly phosgene.

Keep material in closed, properly labeled containers

Avoid contamination of water supplies. Handling, storage, and use procedures must be carefully monitored to avoid spills or leaks.

Any spill or leak has the potential to cause underground water contamination which may, if sufficiently severe, render a drinking water source unfit for human consumption. Contamination which occurs cannot be easily corrected.

Reuse of containers must meet with all applicable OSHA, DOT, and EPA regulations.

Do not breathe vapors. High vapor concentrations can cause dizziness, unconsciousness, and directly affects the central nervous system, the respiratory system and the heart.

Use only with adequate ventilation. Ventilation must be adequate enough to limit employees' exposure.

Avoid contact with the eyes and skin.

Do not ingest.

Do not eat, drink, or smoke in work areas or where material is stored.

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N/A = NOT APPLICABLE

N/D = NOT DETERMINED

N/E = NOT ESTABLISHED

S = SUSPECTED

ST = SHORT TERM EXPOSURE LIMIT: 5 MINUTES IN ANY 3 HRS.