

Section 1. Product and Company Identification

Product Name Pinatec® 5 TDCE
CAS Number 156-60-5

Parchem - fine & specialty chemicals
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Collect Calls Accepted

Section 2. Hazards Identification

Classification of the substance or mixture
GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225
Acute toxicity, Inhalation (Category 4), H332
Acute aquatic toxicity (Category 3), H402
Chronic aquatic toxicity (Category 3), H412

GHS Label Elements

Pictograms:



Signal word: Danger

Hazard and precautionary statements

Hazard statement(s)

H225 Highly flammable liquid and vapor.
H332 Harmful if inhaled.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statement(s)

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.



P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P312 Call a POISON CENTER or doctor/ physician if you feel unwell.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
P403 + P235 Store in a well-ventilated place. Keep cool.
P501 Dispose of contents/ container to an approved waste disposal plant.

Potential Health Effects

Inhalation: This product is a central nervous system depressant. Inhalation can cause irritation of the respiratory tract, dizziness, nausea, headache, loss of coordination and equilibrium, unconsciousness and even death in confined or poorly ventilated areas. Cardiac sensitization has occurred in dogs dosed at concentrations greater than 25%.

Eye: Eye contact can result in discomfort, pain, irritation and discharge. Washing of the eyes with water may result in corneal injury.

Skin: Prolonged contact such as occurs when material is trapped on the skin (e.g. under a glove) may result in severe irritation. Skin absorption is not expected to be of toxicological significance under normal industrial use.

Ingestion: Swallowing may irritate the mouth and GI tract as well as cause the effects listed for inhalation exposure. Vomiting may cause aspiration into the lungs that may lead to potentially fatal chemical pneumonia and pulmonary edema.

Section 3. Composition / Information on Ingredients

Common Name	Trans-1,2-Dichloroethylene
Synonym(s)	Trans-acetylene Dichloride; Trans-dichloroethylene; TDCE
Formula	C ₂ H ₂ Cl ₂
CAS Number	156-60-5

COMPONENT	CAS NUMBER	CONCENTRATION
Pinattec® 5 TDCE	156-60-5	> 99%

Section 4. First Aid Measures

Inhalation: Remove from area to fresh air. If symptomatic, contact a poison control center, emergency room or physician for treatment information.

Eye: Remove contact lens and pour a gentle stream of warm water through the affected eye for at least 15 minutes. If irritation persists, contact a poison control center, emergency room, or physician as further treatment may be necessary.



Skin: Run a gentle stream of water over the affected area for 15 minutes. A mild soap may be used if available. If any symptoms persist, contact a poison control center, emergency room, or physician as further treatment may be necessary.

Ingestion: Gently wipe or rinse the inside of the mouth with water. Sips of water may be given if person is fully conscious. Never give anything by mouth to an unconscious or convulsing person. Do not induce vomiting. Contact a poison control center, emergency room or physician right away as further treatment will be necessary.

Section 5. Firefighting Measures

Flash Point: 36°F (2°C, closed cup)

LEL: 9.7% **UEL:** 12.8%

Flammability Class (OSHA): IB

Autoignition: 860°F (460°C)

Fire and Explosion Hazards: Severe fire hazard. Vapor/air mixtures are explosive above flash point. The vapor is heavier than air. Vapors or gases may ignite at distant ignition sources and flash back.

Extinguishing Media: Water spray, carbon dioxide, dry chemical powder or appropriate foam.

Large Fires: Use regular foam or flood with fine water spray.

Fire-Fighting Instruction: Emits toxic fumes under fire conditions. Vapor concentration in a confined or poorly ventilated area can be ignited upon contact with a high energy spark, flame, or high intensity source of heat. Vapors may travel a considerable distance to source of ignition and flash back. Vapor/air mixtures are explosive.

Fire-Fighting Equipment: NIOSH approved pressure demand, self-contained breathing apparatus and full protective clothing.

Fire-Fighting Instructions: Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks. For fires in cargo or storage area: Cool containers with water from unmanned hose holder or monitor nozzles until well after fire is out. If this is impossible then take the following precautions: Keep unnecessary people away, isolate hazard area and deny entry. Let the fire burn. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. For tank, rail car or tank truck: Evacuation radius: 800 meters (1/2 mile). Do not attempt to extinguish fire unless flow of material can be stopped first. Flood with fine water spray. Do not scatter spilled material with high-pressure water streams. Cool containers with water spray until well after the fire is out. Apply water from a protected location or from a safe distance. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas. Water may be ineffective.

Section 6. Accidental Release Measures

Spill/Leak Procedures: Immediately evacuate the area. Provide maximum ventilation. Unprotected personnel should move upwind of spill. Only personnel equipped with proper respiratory and eye/skin protection should be permitted in the area. Take precautions as necessary to prevent contamination of ground and surface waters. Recover spilled material on adsorbents, such as sawdust or vermiculite, and sweep into closed containers for disposal. After all visible traces, including ignitable vapors, have been removed, thoroughly wet vacuum the area. Do not flush to



sewer. If area of spill is porous, remove as much earth and gravel, etc. as necessary and place in closed containers for disposal.

Occupational Release: Avoid heat, flames, sparks and other sources of ignition. Stop leak if possible without personal risk. Reduce vapors with water spray.

Small Spills: Absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal.

Large Spills: Dike for later disposal. Remove sources of ignition. Keep unnecessary people away, isolate hazard area and deny entry. Notify Local Emergency Planning Committee and State Emergency Response Commission for release greater than or equal to RQ (U.S. SARA Section 304). If release occurs in the U.S. and is reportable under CERCLA Section 103, notify the National Response Center at (800)424-8802 (USA) or (202)426-2675 (USA).

Section 7. Handling and Storage

Handling Precautions: Keep container closed when not in use. Store only 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.

Other Precautions: Contamination that does occur cannot be easily corrected. Do not use cutting or welding torches on drums that contained this product unless properly purged and cleaned. Vapors are heavier than air and will collect in low areas. This material can react with air to form explosive peroxide. Do not use in poorly ventilated or confined spaces without proper respiratory protection.

Storage: Store and handle in accordance with all current regulations and standards. Subject to storage regulations: U.S. OSHA 29 CFR 1910.106 Grounding and bonding required. Keep Separated from incompatible substances.

Section 8. Exposure Controls / Personal Protection

Ventilation Requirements: Use local exhaust or general room/dilution ventilation sufficient to maintain employee exposure below permissible exposure limits.

Respiratory Protection: Use a half or full facepiece organic vapor chemical cartridge or canister respirator when concentrations exceed permissible limits. Use self-contained breathing apparatus (SCBA) or full facepiece airline respirator with auxiliary SCBA operated in the pressure demand mode for emergencies and for all work performed in storage vessels, poorly ventilated rooms, and other confined areas. Respirators must be approved by NIOSH. The respiratory use limitations made by NIOSH or the manufacturer must be observed. Respiratory protection programs must be in accordance with 29 CFR 1910.134

Eye/Face: Splash proof goggles and face shield.

Protective Gloves: Wear appropriate chemical resistant gloves.

Protective Clothing: Personal protective clothing and use of equipment must be in accordance with 29 CFR 1910.132 (general requirements), .133 (eye and face protection), and .13 (hand protection).

Special/Other: Boots, aprons, or chemical suits should be used when necessary to prevent skin contact.



Section 9. Physical and Chemical Properties

Physical State: Liquid
Water Solubility: Slightly
Appearance: Clear, colorless
Vapor Pressure: 400 mm Hg at 87°F
Odor: Pleasant
Volume % Volatile: N/A
Boiling Point: 118°F (48°C)
Relative Vapor Density: 3.34
Freezing Point: -58°F (-50°C)
Specific Gravity: 1.2565 (water =1)
Evaporation Rate: N/A
Bulk Density: N/A

Section 10. Stability and Reactivity

Stability: May decompose on contact with air, light, moisture, heat or storage and use above room temperature. Release toxic, corrosive, flammable or explosive gases.
Conditions to Avoid: Avoid heat, flames, sparks and other sources of ignition. Containers may rupture or explode if exposed to heat. Keep out of water supplies and sewers.
Incompatibilities: Bases, metals, combustible materials, oxidizing materials, acids, steam, oxidizers, elevated temperatures, caustic soda, and caustic potash. Shock sensitive compounds may be formed.
Products of Decomposition: Phosgene, halogenated compounds, oxides of carbon
Hazardous Polymerization: May polymerize. Avoid contact with incompatible materials.

Section 11. Toxicological Information

Acute Inhalation LC50: (Rat) 24,100 ppm (4 hours).
Acute Dermal LD50: (Rabbit) > 5000 mg/kg.
Skin Irritation: Mildly to moderately irritating.
Eye Irritation: Moderately to severely irritating.
Acute Oral LD50: Slight to very low toxicity.

Chronic Effects/Carcinogenicity: This product is NOT listed as a carcinogen or suspected carcinogen by NTP, IARC, or OSHA.

Medical Conditions Aggravated: None known.

Delayed Effects of Overexposure: Subchronic: A 90 day inhalation study exposing rats to 1,2-dichloroethylene reported no adverse effects on body weight, clinical observations, food consumption, clinical or anatomical pathology parameters, or liver cell proliferation. The no-observed-effect level (NOEL) for this study was 4000 ppm in rats that suggests a low order of toxicity by the inhalation.



In an NTP study, rats and mice were dose fed for a period of 13 weeks. No mortality, clinical observations of toxicity, or food consumption effects was noted in mice or rats. Minor reductions in body weights were observed in mice. Liver organ weights changes were reported in rats. Rats dosed at the highest level (50,000 ppm) showed a few abnormal clinical pathology findings. Histopathology reports revealed no microscopic evidence of treatment-related target organ effects. In separate 90-day drinking water studies, 1,2-dichloroethylene exposed rats and mice showed no dose related effects in hematological, serological, and gross pathological, or urinary parameters.

Mutagenesis: Trans-1,2-dichloroethylene was not mutagenic to E-coli or S. Typhimurium when tested with microsomal activation. In another study, trans-1,2-dichloroethylene did not produce mutations in Saccharomyces cerevisiae with or without microsomal activation. No genetic effects were reported in a vivo host mediated mutagenic assay.

Reproductive/Developmental: In a teratology study conducted in rats by the inhalation route of exposure, significant fetal toxicity (i.e., decreased body weight, increased skeletal variations) was observed only at maternally toxic concentrations (12,000 ppm). Based on the results of this study, trans-1,2-dichloroethylene would not be considered to be a developmental toxicant.

Section 12. Ecological Information

Invertebrate Toxicity: < 110,000 µg/L 48 hour(s) (Mortality) Water flea (Daphnia magna)

Section 13. Disposal Considerations

Waste Treatment Methods: Dispose of product and contaminated packaging in accordance with all local, state, and federal environmental control regulations.

Section 14. Transport Information

Proper Shipping Name: 1,2-Dichloroethylene

Hazard Class: 3 (Flammable Liquid)

UN Number: UN1150

Packing Group: II

USA-RQ, Hazardous Substance and Quantity: 1000 lbs/454 kg (1,2-trans-Dichloroethylene)

Section 15. Regulatory Information

USA TSCA: All components of this product are listed on the TSCA Inventory.

Europe EINECS: All components in this product are listed on EINECS or meet the polymer definition. (205-860-2)

Canada Domestic Substances List (DSL): This product and/or all of its components are listed on the Canadian DSL.

Australia AICS: All components of this product are listed on AICS.

Korea ECL: All components in this product are listed on the Korean Existing Chemicals Inventory (KECI).

Japan MITI (ENCS): All components of this product are listed on MITI.



Philippines PICCS: One or more components in this product are not listed on the Philippines Inventory of Chemical and Chemical Substances (PICCS). This product can only be used in R&D applications.

SARA Title III Section 302 Extremely Hazardous Substances (40 CFR 355 Subpart B):
Not regulated.

SARA Title III Section 304 Extremely Hazardous Substances (40 CFR 355 Subpart C):
Not regulated.

SARA Title III SARA Sections 311/312 Hazardous Categories (40 CFR 370 Subparts B and C)

Acute: Yes

Chronic: No

Fire: Yes

Reactive: Yes

Sudden Release: No

SARA Title III Section 313 (40 CFR 372.65): 1,2-Dichloroethylene (all isomers)

CERCLA Hazardous Substance: Listed in Table 302.4 of 40 CFR Part 302 as a hazardous substance with a reportable quantity of 1000 pounds. Releases to air, land or water which exceed the RQ must be reported to the National Response Center, 800-424-8802.

OSHA PROCESS SAFETY (29 CFR 1910.119): Not regulated

State Regulations

California Proposition 65: Not regulated.

Canada Inventory (DSL/NDSL): Not determined.

Canadian Transportation of Dangerous Goods

Proper Shipping Name: 1,2-Dichloroethylene

Hazard Class: 3 (Flammable Liquid)

UN Number: UN1150

Packing Group: II

USA-RQ, Hazardous Substance and Quantity: 1000 lbs./454 kg (1,2-trans-Dichloroethylene)

RCRA: Waste trans and contaminated soils/materials from spill cleanup are U079 hazardous waste as per 40 CFR 261.33 and must be disposed of accordingly under RCRA.

Canada Regulations (WHMIS): Class B2 - Flammable Liquids. Class D2B - Toxic Materials.

HMIS

Health: 2

Flammability: 3

Reactivity: 3



NPFA Code

Health: 2

Flammability: 3

Reactivity: 2

Section 16. Other Information

Disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

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