

1,2 trans-dichloroethylene

SAFETY DATA SHEET

PREPARATION DATE: January 4, 2023 Rev 3 Replaces June 8, 2019

1. Product and Company Identification

Product Name: 1,2 trans-Dichloroethylene
Synonyms: trans-1,2-Dichloroethylene trans-acetylene dichloride, trans-dichloroethylene, 1,2-dichloroethylene

Identified uses: Chlorinated hydrocarbon used in cleaning mixtures

Supplier: Enviro Tech International, Inc.
1800 N 25th Avenue
Melrose Park, IL 60160 708-343-6641
www.envirotechint.com

Contact Person: sales@envirotechint.com

Emergency Contact: Velocity EHS 24-HR EMERGENCY CONTACT U.S, Canada, Puerto Rico, U.S. Virgin Islands (800) 255-3924
INTERNATIONAL CALLS: +01-813-248-0585
Non emergency number: 708-343-6641 8 AM to 4 pm (CST - US)

2. HAZARD IDENTIFICATION

Signal Word: Danger

Classification

Acute Toxicity - Oral
Acute Toxicity – Inhalation
Skin Corrosion/Irritation
Eye Damage/Irritation
Specific Target Organ Toxicity (Single Exposure)
Specific Target Organ Toxicity (Single Exposure)
Specific Target Organ Toxicity (Single Exposure)
Flammable Liquids
Aquatic Hazard (Acute)
Aquatic Hazard (Long-Term)
Aspiration Hazard

Category 4
Category 4
Category 2
Category 2A
Category 1
Category 2
Category 2
Category 3
Category 2
Category 3
Category 3
Category 1



Hazard Statements

H225 Highly Flammable Liquid and Vapor.
H304 May be fatal if swallowed and enters airways.
H332 Harmful if inhaled.
H412 Harmful to aquatic life with long lasting effects.

Precautionary Statements

Prevention:

P202 Do not handle until all safety precautions have been read and understood.
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 vapors
 P271 Use only outdoors or in a well-ventilated area
 P273 Avoid release to the environment
 P280 Wear protective gloves/eye protection/face protection

Response:

P301 + P310 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
 P303 +P361+ P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
 P304 + P340+P312 If INHALED Remove person to fresh air keep comfortable for breathing. Call a POISON CENTER/doctor/...if you feel unwell.
 P331 Do NOT induce vomiting.
 P370+378 In case of fire: Use Dry Chemical Extinguisher (B-C), Water Spray, Carbon Dioxide or appropriate foam to extinguish.

Storage & Disposal:

P403+P235 Store in a well-ventilated place. Keep Cool.
 P405 Store locked up
 P501 Dispose of contents/containers in accordance with all local/regional/national/international regulations.

3. COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENT	CAS	WEIGHT PERCENT
trans-1,2-dichloroethylene	CAS: 156-60-5 EC: 205-860-2	>99%

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.

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.

Skin Contact: 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.

Eye Contact: 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.

Notes to Physician: Do not give adrenaline or similar drugs. Because of possible disturbances of cardiac rhythm, catecholamine drugs, such as epinephrine, that may be used in situations of emergency life support should be used with special caution.

5. FIRE FIGHTING MEASURES

Flash point (°F): 36°F (ASTM D56)

Extinguishing Media: Dry Chemical Extinguisher (B-C), Water Foam Carbon Dioxide or appropriate foam.

Unsuitable extinguishing media: No data available.

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

Hazardous combustion products: Thermal decomposition or combustion may liberate hydrogen chloride, chlorinated hydrocarbons, carbonyl chloride, carbon oxides and other toxic gases or vapors.

Special Fire Fighting Procedures: 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.

Protective Equipment: Fire-fighters must wear NIOSH approved pressure demand, self-contained breathing apparatus and full protective clothing when fighting chemical fires.

Further information: Remove container from danger zone and cool with water. Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Wear protective clothing as described in Section 8 of this safety data sheet. Do not breathe vapors or aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert.

Environmental Precautions Do not discharge or let enter into drains, water courses or onto the ground. Contain spillages with sand, earth or any suitable adsorbent material.

Spill Clean Up Methods 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. Dike area to contain spill. 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. 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.

Reference to other sections

For personal protection, see section 8. For waste disposal, see section 13

7. HANDLING AND STORAGE

Handling

Do not inhale substance/mixture. Avoid generation of vapors/aerosols. 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. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge. Change contaminated clothing. Preventive skin protection recommended. Wash hands after working with substance.

Storage

Keep container closed when not in use. Store only in closed, properly labeled containers.

8. EXPOSURE CONTROL AND PERSONAL PROTECTION

Exposure Limits:

OSHA: 200 ppm (790 mg/m³) OSHA TWA
ACGIH: 200 ppm TWA. (1, 2-trans-Dichloroethylene)

Process Conditions

Provide eyewash, quick drench.

Engineering Measures

Provide adequate general and local exhaust ventilation.

Respiratory Equipment

Suitable respiratory protection should be provided. Check that mask fits tight and change filter regularly.

Hand Protection

Use suitable solvent resistant gloves if risk of skin contact.

Eye Protection

Required. Wear approved safety goggles with side shields. Use face shield where possibility of face contact due to splashing, spraying or other airborne contact exists.

Hygiene Measures

Wash hands at the end of each work shift and before eating, smoking and using the toilet. Wash promptly with soap & water if skin becomes contaminated. When using do not eat, drink or smoke.

Skin Protection

Required. Wear flame retardant antistatic protective clothing, apron or protective clothing in case of splashes.

9. PHYSICAL AND CHEMICAL PROPERTIES

Flash Point (Method):	36° F (TAG OPEN CUP)
Lower Explosion Limit:	6.7 % (VOL.) GAS IN AIR
Upper Explosion Limit:	18 % (VOL.) GAS IN AIR
Physical State:	Liquid
Color:	Colorless
Odor:	Characteristic
Molecular Weight:	96.94
Molecular Formula:	C ₂ H ₂ Cl ₂
Boiling Point:	118° F (48° C)
Freezing Point:	-58° F (-50° C)
Vapor Pressure at 25° C:	366 mmHg
Vapor Density (Air=1):	3.34
Specific Gravity at 25° C:	1.27
Water Solubility@ 70° F:	slightly soluble
Evaporation Rate:	NA

10. STABILITY AND REACTIVITY

Stability	Stable under normal temperature conditions and recommended use. No decomposition if stored and applied as directed.
Reactivity:	Vapors may form explosive mixture with air.
Conditions To Avoid	Avoid open flames and other sources of ignition. Avoid high temperatures.
Incompatible Materials	Steam, oxidizers, caustic soda, caustic potash. Shock sensitive compounds may be formed.
Hazardous Decomposition Products	Hydrogen chloride gas. Oxides of carbon.

11. TOXICOLOGICAL INFORMATION

Acute Inhalation L _C 50:	(rat) 24,100 ppm (4 hours). Slight to very low toxicity.
Acute Dermal L _D 50:	(rabbit) >5000 mg/kg. Slight to very low toxicity.
Skin Irritation:	Mildly to moderately irritating.
Eye Irritation:	Moderately to severely irritating.
Acute Oral L _D 50:	Slight to very low toxicity.
Chronic Effects/Carcinogenicity:	NOT listed as a carcinogen by NTP, IARC, or OSHA.
Medical Conditions Aggravated:	None known.

Effects of overexposure:

ACUTE

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

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 product 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.

12. ECOLOGICAL INFORMATION

INVERTEBRATE TOXICITY: <110,000 ug/L 48 hour(s) (Mortality) Water flea (Daphnia magna)

13. DISPOSAL CONSIDERATIONS

Disposal Contaminated sand, sawdust, vermiculite, soil 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 to prevent environmental contamination. It is your duty to dispose of the chemical materials and/or their containers in accordance with the Clean Air Act, the Clean Water Act, the Resource Conservation and Recovery Act, as well as any other relevant Federal, State, or local laws/regulations regarding disposal.

14. TRANSPORTATION INFORMATION

US DOT

UN1150 Proper Shipping Name: 1,2-Dichloroethylene

Class or Division: 3 Flammable liquid

Packing Group: II

IATA

UN1150 Proper Shipping Name: 1,2-Dichloroethylene

Class or Division: 3 Flammable liquid

Packing Group: II

IMDG

UN1150 Proper Shipping Name: 1,2-Dichloroethylene

Class or Division: 3 Flammable liquid

Packing Group: II

15. REGULATORY INFORMATION

USA TSCA:

All components of this product are listed and active on the TSCA Inventory.

SARA 302:

None

SARA (311, 312) Hazard Class:

Acute Health Hazard.

SARA (313) Chemicals:

Not listed

SARA Extremely Hazardous Substance:

Not listed

CERCLA Hazardous Substance:

Listed in 40 CFR 302 (302.4) as a hazardous substance with a reportable quantity (RQ) of 1,000 pounds. Releases which exceed the RQ must be reported to the National Response Center, 800-424-8802.

RCRA:

Waste product 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. If discarded or spilled product may exhibit one or more hazardous waste characteristics under 40 CFR 261.24, including D001 – ignitable.

VOC:

100%. Contains volatile organic compounds

HAP:

Not Listed

USEPA SNAP:

Approved

CONEG Regulation:

Lead, cadmium, mercury and hexavalent chromium are not intentionally added. Incidental concentration levels of these metals is not expected to exceed 100 ppm by weight.

Right to Know:

Massachusetts, Pennsylvania, New Jersey

International

Canada Regulations (WHMIS):

Class B2 - Flammable Liquids. Class D2B - Toxic Materials.

Canada DSL:

Listed on the Canadian DSL.

Europe EINECS:

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

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.

16. OTHER INFORMATION

Only trained personnel should use this material. Since empty containers retain product residue, follow label warnings, even after container is emptied. For further Health and Safety information contact: Health and Safety Officer. Each user of this product should study this SDS carefully and consult appropriate expertise as necessary to become aware of and understand the data contained in this SDS and any hazards that may be associated with this product. The information provided in this Safety Data Sheet relates only to the specific material designated herein. The user is responsible for determining the conditions of safe use of this product and for complying with all Federal, State and Local governmental laws and regulations concerning its use. Enviro Tech International, Inc. makes no warranty, express or implied, including the warranty of merchantability and fitness for a particular purpose, and assumes no liability or responsibility for the accuracy, completeness, timeliness or usefulness of this information. Enviro Tech International, Inc assumes no liability for any damages incurred, whether directly or indirectly, as a result of any errors, omissions or discrepancies in this information. Enviro Tech International, Inc. assumes no liability for reliance on this data and assumes no liability for damages related to the use or misuse of this product.

NFPA Rating: Health: 2 Flammability: 3 Instability: 0

HMIS Classification: Health: 2 Flammability: 3 Physical: 0

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