

**MATERIAL SAFETY DATA SHEET**

Product Name: 1,1,2,2-Tetrachloroethane

CAS No.:79-34-5

Version: 0

**1. Identification**

**Product Code** : 90258, 90573  
**Company Name** : Advent Chembio Private Limited  
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**2. Composition/Information on Ingredients**

Ingredient	CAS No	Percent
1,1,2,2-TETRACHLOROETHANE	79-34-5	100%

**3. Hazards Identification****Hazard classification**

**Emergency Overview** : DANGER! MAY BE FATAL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN.  
AFFECTS LIVER, KIDNEYS, CENTRAL NERVOUS SYSTEM AND GASTROINTESTINAL TRACT.  
CAUSES SEVERE EYE IRRITATION. CAUSES IRRITATION TO SKIN AND RESPIRATORY TRACT.

Health Rating : 2 - Moderate (Poison)

Flammability Rating : 0 - None

Reactivity Rating : 1 - Slight

Contact Rating : 3 - Severe (Life)

**Label elements****Hazard symbol**

Signal word : Danger

**Potential Health Effects**

Generally considered the most toxic of the common chlorinated hydrocarbons

**Inhalation** : Highly toxic. Strong irritant of the mucous membranes and upper respiratory tract. Initial symptoms may include irritation of the nose and throat, salivation. Continued exposure may produce restlessness, dizziness, nausea, vomiting and narcosis. Symptoms may progress to a more serious illness with jaundice, liver tenderness, lung

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- Ingestion** : Edema, and possibly convulsions and coma before death.  
: Highly toxic via ingestion. Symptoms parallel those from inhalation. Causes irritation to the gastrointestinal tract. Symptoms may include nausea, vomiting and diarrhea.
- Skin Contact** : Causes irritation to skin. Symptoms include redness, itching, and pain. May be absorbed through the skin with possible systemic effects.
- Eye Contact** : Vapors cause eye irritation. Splashes cause severe irritation, possible corneal burns and eye damage.
- Chronic Exposure** : Chronic exposure can produce the same life threatening health effects noted for inhalation exposure above. Chronic exposure may also affect liver, gastrointestinal tract and blood-forming organs
- Aggravation of Pre-existing Conditions** : Persons with pre-existing skin, eye or central nervous system disorders, or impaired liver, kidney, or pulmonary function may be more susceptible to the effects of this substance.

**4. First Aid Measures**

- General information** : Get medical advice/attention if you feel unwell. If medical advice is needed, have product container or label at hand. Show this safety data sheet to the doctor in attendance.
- Ingestion** : Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Call a physician immediately.
- Inhalation** : Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician immediately.
- Skin contact** : In case of contact, immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Call a physician immediately.
- Eye contact** : Immediately flush eyes with gentle but large stream of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Call a physician immediately.
- Most important symptoms/effects, acute and delayed** : Irritating to eyes, respiratory system and skin.
- Indication of immediate medical attention and special treatment needed** : Treat symptomatically. Symptoms may be delayed.

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**5. Fire fighting measures**

- Fire** : Not considered to be a fire hazard.
- Explosion** : Not considered to be an explosion hazard.
- Fire Extinguishing Media** : Use any means suitable for extinguishing surrounding fire.
- Special Information** : In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

**6. Accidental Release Measures**

- Personal precautions, protective equipment and emergency procedures** : Use personal protective equipment. Keep unauthorized personnel away. Keep upwind. Ventilate closed spaces before entering them. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- Methods and material for containment and cleaning up** : Eliminate all ignition sources if safe to do so. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. Dike far ahead of larger spill for later recovery and disposal.
- Notification Procedures** : Dike for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Stop the flow of material, if this is without risk. Inform authorities if large amounts are involved.
- Environmental precautions** : Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

**MATERIAL SAFETY DATA SHEET****Product Name:** 1,1,2,2-Tetrachloroethane**CAS No.:**79-34-5**Version:** 0**7. Handling and Storage**

- Precautions for safe handling** : DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Take precautionary measures against static discharges. Contact with air and light may form explosive peroxides. If peroxide formation is suspected, do not open or move container. Use personal protective equipment as required. Avoid breathing mists or vapors. Do not taste or swallow. Use only with adequate ventilation. Avoid contact with eyes, skin, and clothing. Wash hands thoroughly after handling.
- Conditions for safe storage, including any incompatibilities** : Keep away from food, drink and animal feeding stuffs. Prolonged contact with air may cause formation of explosive peroxides. Nitrogen blanketing of containers is recommended. Keep container tightly closed in a cool, well-ventilated place. Ground container and transfer equipment to eliminate static electric sparks. Comply with all national, state, and local codes pertaining to the storage, handling, dispensing, and disposal of flammable liquids.

**8. Exposure Controls Personal Protection****Control parameters****Airborne Exposure Limits**

OSHA Permissible Exposure Limit : 5 ppm (TWA) skin

ACGIH Threshold Limit Value (TLV) : 1 ppm (TWA) skin, A3 - Confirmed animal carcinogen

**Ventilation System**

: A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, Industrial Ventilation, A Manual of Recommended Practices, most recent edition, for details.

**Personal Respirators (NIOSH Approved)**

: If the exposure limit is exceeded, wear a supplied air, full-face piece respirator, airtight hood, or full-face piece self-contained breathing apparatus. This substance has poor warning properties.

**Skin Protection**

: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact

**Eye Protection:**

: Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

**Other Control Measures**

: There is insufficient data in the published literature to assign complete numerical SAF-T-DATA\* ratings and laboratory protective equipment for this product. Special precautions must be used in storage, use and handling. Protective equipment for laboratory bench use should be chosen using professional judgment based on the size and type of reaction or test to be conducted and the available ventilation, with

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**Hygiene measures** : overriding consideration to minimize contact with the chemical.  
: Provide eyewash station and safety shower. Observe good industrial hygiene practices. Do not eat, drink or smoke when using the product. Wash hands before breaks and immediately after handling the product. Wash contaminated clothing before reuse. Avoid contact with eyes, skin, and clothing.

**9. Physical and Chemical Properties**

**Appearance** : Clear, colorless liquid.  
**Odor** : Chloroform-like odor..  
**pH** : No data available.  
**Melting point/freezing point** : -43C (-45F)  
**Initial boiling point and boiling range** : 147C (297F)  
**Flash Point** : No information found  
**Vapor pressure** : 5.8 (Air=1)  
**Vapor density** : 8 @ 20C (68F)  
**Relative density** : 1.59 @ 20C  
**Solubility in water** : Slight, 0.3 g/100g water @ 25C (77F).  
**Solubility (other)** : No data available.  
**Formula** : C<sub>2</sub>H<sub>2</sub>Cl<sub>4</sub>  
**Molecular Weight** : 167.85 g/mol

**10. Stability and Reactivity**

**Reactivity** : No dangerous reaction known under conditions of normal use.  
**Chemical stability** : Stable under ordinary conditions of use and storage. Unusual exposure to light in the presence of air may form small amounts of phosgene.  
**Possibility of hazardous reactions** : Hazardous polymerization does not occur.  
**Conditions to avoid** : No information found  
**Incompatible materials** : Reacts with chemically active metals, fuming sulfuric acid and strong caustics. Attacks most plastics and rubber.  
**Hazardous decomposition products** : May produce carbon monoxide, carbon dioxide, hydrogen chloride and phosgene when heated to decomposition.

**11. Toxicological Information****Information on likely routes of exposure**

**Ingestion** : Harmful if swallowed. Irritating. May cause nausea, stomach pain and vomiting.  
**Inhalation** : Irritating to respiratory tract.  
**Skin contact** : No data available.

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**Environmental Toxicity** : produced hydroxyl radicals. When released into the air, this material is expected to have a half-life of greater than 30 days. This material may be toxic to aquatic life. The LC50/96-hour values for fish are between 10 and 100 mg/l. The EC50/48-hour values for daphnia are between 1 and 10 mg/l.

**13. Disposal consideration**

**Disposal instructions** : Discharge, treatment, or disposal may be subject to national, state, or local laws.

**Contaminated packaging** : Since emptied containers retain product residue, follow label warnings even after container is emptied.

**14. Transport Information**

	UN No.	UN proper shipping name	Hazard Class(es)	Packaging group	Marine Pollutant
<b>DOT</b>	UN1702	1,1,2,2-TETRACHLOROETHANE	6.1	II	yes
<b>IMDG</b>	UN1702	1,1,2,2-TETRACHLOROETHANE	6.1	II	yes
<b>IATA</b>	UN1702	1,1,2,2-TETRACHLOROETHANE	6.1	II	yes

**15. Regulatory Information**

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

Safety, health and environmental regulations/legislation specific for the substance or mixture  
No Data Available.

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