

## 1,2-Dichloroethane-d<sub>4</sub>

### Section 1. Chemical product and company identifications

**Product code:** D-0103

**Chemical formula:** C<sub>2</sub>D<sub>4</sub>Cl<sub>2</sub>

**CAS:** 17060-07-0

**CAS (unlabelled):** 107-06-2

**Synonyms:** Ethylene Dichloride, Ethylene Chloride

**Supplier / Manufacturer:**

**C/D/N Isotopes Inc.**

88 Leacock Street

Pointe-Claire (Québec) H9R 1H1

Phone: 514-697-6254

Toll-Free (Canada & USA): 1-800-565-4696

Fax: 514-697-6148

Website: www.cdnisotopes.com

**In case of emergency:**

**TOXYSKAN HOTLINE: 1-855-780-0599**

### Section 2. Hazards identifications

**GHS (Globally Harmonized System of Classification and Labelling of Chemicals):**

**GHS Classification:**

- Flammable liquids (Category 2)
- Acute toxicity, Oral (Category 4)
- Acute toxicity, Inhalation (Category 3)
- Skin irritation (Category 2)
- Eye irritation (Category 2A)
- Carcinogenicity (Category 1B)
- Specific target organ toxicity - single exposure (Category 3), Respiratory system

**GHS Label elements:**

- Pictograms:    
- Signal word: Danger

**Hazards statement:**

- H225 Highly flammable liquid and vapour.
- H302 Harmful if swallowed.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H331 Toxic if inhaled.
- H335 May cause respiratory irritation.
- H350 May cause cancer.

**Precautionary statement:**

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P210 Keep away from heat/ hot surfaces/ sparks/ open flames/ ignition sources. 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/ vapours/ spray.
- P264 Wash skin thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P271 Use only outdoors or in a well-ventilated area.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
- 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 person to fresh air and keep comfortable for breathing.

- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P316 Get emergency medical help immediately.
- P331 Do NOT induce vomiting.
- P332 + P313 IF SKIN irritation occurs: Get medical advice/attention.
- P337 + P313 IF eye irritation persists: Get medical advice/attention.
- P362 Take off contaminated clothing and wash before reuse.
- P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
- P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
- P405 Store locked up.
- P501 Dispose of contents/ container to an approved waste disposal plant.

### **Section 3. Composition and information on ingredients**

<b><u>Name</u></b>	<b><u>CAS</u></b>	<b><u>Concentration %</u></b>
1,2-Dichloroethane-d <sub>4</sub>	17060-07-0	> 98

### **Section 4. First aid measures**

**Eye contact:** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**Skin contact:** Wash off with soap and plenty of water. Consult a physician.

**Inhalation:** If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**Ingestion:** Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

**General advice:** Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**Indication of immediate medical attention and special treatment needed, if necessary:** Treat symptomatically.

**Most important symptoms and effects, both acute and delayed:** Difficulty in breathing. Coughing and/ or wheezing. Dizziness. May cause redness and tearing of the eyes. Burning sensation.

### **Section 5. Firefighting measures**

**Flammability of the product:** Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flame/hot surface. No smoking.

**Products of combustion:** Hazardous decomposition products formed under fire conditions: Carbon oxides, hydrogen chloride gas.

**Firefighting media and instructions:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Special protective equipment for firefighters:** Wear self-contained breathing apparatus for firefighting if necessary.

### **Section 6. Accidental release measures**

**Personal precautions:** Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition.

**Environmental precautions:** Do not let product enter drains.

**Methods for cleaning up:** Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

### **Section 7. Handling and storage**

**Handling:** Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Provide appropriate exhaust ventilation. Keep away from sources of ignition - No smoking.

**Storage:** Store at room temperature. Adequate ventilation. Protect from heat and ignition sources.

### **Section 8. Exposure Controls, Personal Protections**

**Engineering controls:** Use mechanical exhaust or laboratory fumehood to avoid exposure.

**Eyes:** Safety glasses with side-shields conforming to NIOSH (US) or EN 166 (EU).

**Respiratory:** Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US).

**Hands:** Handle with gloves. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**Skin/body:** Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

## **Section 9. Physical and chemical properties (unlabelled)**

**Molecular weight:** 98.96 g/mol  
**Physical status:** Liquid  
**Color:** Colorless  
**Odour:** No data available  
**Density:** 1.256 g/mL  
**Melting point:** -35 °C (-31 °F)  
**Boiling point:** 83 °C (181 °F)  
**Vapour pressure:** 87 hPa (65 mmHg) at 20 °C (68 °F)  
**Vapour density:** 3.4 (Air = 1)  
**Partition coefficient (octanol/water):** log Pow: 1.48  
**Water solubility:** 8.6 g/L  
**Lower explosion limit:** 6.2 Vol%  
**Upper explosion limit:** 15.9 Vol%  
**Auto-ignition temperature:** 440 °C (824 °F)  
**Flash point:** 13 °C (55 °F)

## **Section 10. Stability and reactivity**

**Stability and reactivity:** Stable under recommended storage conditions.  
**Incompatibility:** Strong oxidizing agents.  
**Products of combustion:** Hazardous decomposition products formed under fire conditions: Carbon oxides, hydrogen chloride gas.  
**Reactivity conditions:** Heat, flames and sparks.

## **Section 11. Toxicological information**

**Toxicological data:** Ethylene Dichloride

### **Information on ingredients:**

<b>Name</b>	<b>CAS</b>	<b>LD<sub>50</sub></b>	<b>LC<sub>50</sub></b>
Ethylene Dichloride	107-06-2	Oral - Rat - 670 mg/kg Dermal - Rabbit - 2,800 mg/kg	Inhalation - Rat - 6 h - 5,100 ppm

### **Potential acute effects**

- **Eyes:** Causes serious eye irritation.
- **Skin:** Causes skin irritation.
- **Inhalation:** Toxic if inhaled. May cause respiratory tract irritation.
- **Ingestion:** Harmful if swallowed.

### **Potential chronic effects**

- **Carcinogenic effects:** Carcinogenicity - rat - oral. Tumorigenic: Carcinogenic by RTECS criteria. Gastrointestinal: Tumors. Skin and appendages: Other: Tumors. This product is or contains a component that has been reported to be probably carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification. Possible human carcinogen. IARC: 2B - group 2B: Possibly carcinogenic to humans (Ethylene dichloride).
- **Mutagenic effects:** Laboratory experiments have shown mutagenic effects.
- **Teratogenic effects:** No data available.
- **Medical conditions aggravated by overexposure:** No data available.

## **Section 12. Ecological information**

### **Ecological data:**

<b>Name</b>	<b>Results</b>	<b>Species</b>	<b>Period</b>
Ethylene Dichloride	225 mg/l LC50	Oncorhynchus mykiss	96 h
	155 mg/l EC50	Daphnia magna	48 h
	166 mg/l EC50	Selenastrum capricornutum	72 h

**Effects on environment:** No data available.

**Mobility:** No data available.

**Environmental precautions:** No data available.

**Persistence and degradability:** Biotic/Aerobic. Result: < 20 % - Not readily biodegradable. Remarks: Not applicable.

**Bioaccumulative potential:** Lepomis macrochirus - 14 d. Bioconcentration factor (BCF): 2.

## **Section 13. Disposal considerations**

**Waste disposal:** Contact a licensed professional waste disposal service to dispose of this material.

## **Section 14. Transportation information**

### **Classification DOT/IMDG/IATA label:**

**Shipping name:** Ethylene Dichloride

**UN number:** UN1184

**Class:** 3 (6.1)

**Packaging group:** II

**Additional information:** None

## **Section 15. Regulatory information**

### **UNITED STATES: NFPA classification**



Health: 2  
Flammable: 3  
Reactivity: 0  
Special conditions: None

**Legend: 4: Severe, 3: High, 2: Moderate, 1: Slightly, 0: Not hazardous**

### **U.S. Federal regulations:**

**California proposition 65 requirements :** Listed

**SARA section 313 (specific toxic chemical listings) :** Listed

**CERCLA reportable quantity :** Listed

**Sections 302-304 reportable quantity :** Listed

**Community Right-to-Know (Sections 311 and 312) :** Listed

## **Section 16. Additional information**

**Date of issue:** September 23rd, 2024

**Version:** 4

**Elaborated by:** Toxyscan Inc., 1-866-780-0599

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*This safety data sheet has been prepared in accordance with the OSHA (USA), WHMIS (Canada) / GHS classification rules in effect at the time of writing.*