

## 1,1,1-Trichloro-2-(2-chlorophenyl-d<sub>4</sub>)-2-(4-chlorophenyl-d<sub>4</sub>)ethane

### Section 1. Chemical product and company identifications

**Product code:** D-6380  
**Chemical formula:** C<sub>14</sub>H<sub>8</sub>Cl<sub>5</sub>  
**CAS:** 221899-88-3  
**CAS (unlabelled):** 789-02-6  
**Synonyms:** 2,4'-DDT

#### 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



**Physical state:** Solid  
**Warning:** Toxic if swallowed. Suspected of causing cancer.  
**Routes of entry:** Inhalation, ingestion, skin and eyes

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

**GHS Classification:**

- Acute toxicity, Oral (Category 3)
- Carcinogenicity (Category 2)
- Specific target organ toxicity - repeated exposure (Category 1)

**GHS Label elements:**

- Pictograms:  
- Signal word: Danger

**Hazards statement:**

- H301 Toxic if swallowed.
- H351 Suspected of causing cancer.
- H372 Causes damage to organs through prolonged or repeated exposure.

**Precautionary statement:**

- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
- P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
- P316 Get emergency medical help immediately.

### Section 3. Composition and information on ingredients

<u>Name</u>	<u>CAS</u>	<u>Concentration %</u>
1,1,1-Trichloro-2-(2-chlorophenyl-d <sub>4</sub> )-2-(4-chlorophenyl-d <sub>4</sub> )ethane	221899-88-3	> 95

### Section 4. First aid measures

**Eye contact:** Flush eyes with water as a precaution.  
**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.

## **Section 5. Firefighting measures**

**Flammability of the product:** Not flammable or combustible.

**Lower explosion limit:** No data available.

**Upper explosion limit:** No data available.

**Auto-ignition temperature:** No data available.

**Flash point:** No data available.

**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 dust formation. Ensure adequate ventilation. Avoid breathing dust.

**Environmental precautions:** Do not let product enter drains. Discharge into the environment must be avoided.

**Methods for cleaning up:** Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

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

**Handling:** Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation.

**Storage:** Store at room temperature. Adequate ventilation.

## **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:** 354.49 g/mol

**Physical status:** Solid

**Color:** White to off-white

**Odour:** No data available

**Density:** No data available

**Melting point:** 73 - 75 °C (163 - 167 °F)

**Boiling point:** No data available

**Vapour pressure:** No data available

**Vapour density:** No data available

**Partition coefficient (octanol/water):** No data available

**Water solubility:** 0.085 mg/L

## **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:** No data available.

## **Section 11. Toxicological information (unlabelled)**

**Toxicological data:** 2,4'-DDT

**Information on ingredients:**

<u>Name</u>	<u>CAS</u>	<u>LD<sub>50</sub></u>	<u>LC<sub>50</sub></u>
2,4'-DDT	789-02-6	Intraperitoneal - Mouse - 1,577 mg/kg	No data available

### **Potential acute effects**

- **Eyes:** May cause eye irritation.
- **Skin:** May be harmful if absorbed through skin. May cause skin irritation.
- **Inhalation:** May be harmful if inhaled. May cause respiratory tract irritation.
- **Ingestion:** Toxic if swallowed.

### **Potential chronic effects**

- **Carcinogenic effects:** Limited evidence of carcinogenicity in animal studies. IARC: 2B - Group 2B: Possibly carcinogenic to humans (2,4'-DDT). ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
- **Mutagenic effects:** Genotoxicity in vitro - rat - Other cell types. Cytogenetic analysis. Genotoxicity in vitro - mouse - Other cell types. Morphological transformation. Genotoxicity in vivo - rat - Intraperitoneal. Unscheduled DNA synthesis.
- **Teratogenic effects:** No data available.
- **Medical conditions aggravated by overexposure:** Causes damage to organs through prolonged or repeated exposure.

## **Section 12. Ecological information**

**Ecological data:**

<u>Name</u>	<u>Results</u>	<u>Species</u>	<u>Period</u>
2,4'-DDT	0.03 mg/l LC50	Other fish	24 h

**Effects on environment:** An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

**Mobility:** No data available.

**Environmental precautions:** No data available.

**Persistence and degradability:** No data available.

**Bioaccumulative potential:** Pimephales promelas - 32 d - 5.1 µg/l. Bioconcentration factor (BCF): 37,000.

## **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:** Organochlorine pesticide, solid, toxic [1,1,1-Trichloro-2-(2-chlorophenyl)-2-(4-chlorophenyl)ethane]

**UN number:** UN2761

**Class:** 6.1

**Packaging group:** III

**Additional information:** None

## **Section 15. Regulatory information**

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



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

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

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

**TSCA 8(b) inventory:** 2,4'-DDT

**SARA 302/304/311/312 extremely hazardous substances:** Not Listed

**SARA 302/304 emergency planning and notification:** Not Listed

**SARA 302/304/311/312 hazardous chemicals:** Not Listed

**SARA 311/312 MSDS distribution - chemical inventory - hazard identification:** Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard: Not Listed

**CWA (Clean Water Act) 307:** Not Listed

**CWA (Clean Water Act) 311:** Not Listed

**CAA (Clean Air Act) 112 accidental release prevention:** Not Listed

**CAA (Clean Air Act) 112 regulated flammable substances:** Not Listed

**CAA (Clean Air Act) 112 regulated toxic substances:** Not Listed

### **State regulations:**

**DEA List I Chemicals (Precursor Chemicals):** Not Listed

**DEA List II Chemicals (Essential Chemicals):** Not Listed

**Substances in Massachusetts:** Not Listed

**Dangerous substances in New Jersey:** Not Listed

**New York – Dangerous substances with acute effects:** Not Listed

**Dangerous substances in Pennsylvania – right to know:** Not Listed

### **WHMIS (Canada):**



D1B - Toxic material causing immediate and serious toxic effects



D2A - Very toxic material causing other toxic effects

## **Section 16. Additional information**

### **References:**

- ANSI Z400.1, MSDS Standard, 2001.
- Manufacturer's Material Safety Data Sheet.
- 29CFR Part1910.1200 OSHA MSDS Requirements.
- 49CFR Table List of Hazardous Materials, UN#, Proper Shipping Names, PG. -Canada
- Gazette Part II, Vol. 122, No. 2 Registration SOR/88-64 31 December, 1987 Hazardous Products Act "Ingredient Disclosure List".
- Federal act on the controlled products
- Canadian Transport of Dangerous Goods, Regulations and Schedules, Clear Language version 2002.
- Toxicological repertory, HSC.
- Material safety data sheet from the components.

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

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