



# Safety Data Sheet

## Diethyl-d<sub>10</sub> Chlorophosphate

### Section 1. Chemical product and company identifications

**Product code:** D-8081

**Chemical formula:** C<sub>4</sub>D<sub>10</sub>ClO<sub>3</sub>P

**CAS:** 141870-47-5

**CAS (unlabelled):** 814-49-3

**Synonyms:** Diethyl Phosphorochloridate, Diethyl Phosphoryl Chloride

**Supplier / Manufacturer:**

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

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Pointe-Claire (Québec) H9R 1H1

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Fax: 514-697-6148

Website: [www.cdnisotopes.com](http://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 4)
- Acute toxicity, Oral (Category 2)
- Acute toxicity, Dermal (Category 1)
- Skin corrosion (Category 1B)
- Serious eye damage (Category 1)

**GHS Label elements:**

- Pictograms:
- Signal word: Danger

**Hazards statement:**

- H227 Combustible liquid.
- H300 + H310 Fatal if swallowed or in contact with skin.
- H314 Causes severe skin burns and eye damage.

**Precautionary statement:**

- P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.
- P260 Do not breathe dust/fume/gas/mist/vapours/spray.
- P262 Do not get in eyes, on skin, or on clothing.
- P264 Wash hands thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
- P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- 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 victim to fresh air and Keep at rest in a position 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.
- P363 Wash contaminated clothing before reuse.
- P362 + P364 Take off contaminated clothing and wash it before reuse.
- P370 + P378 in case of fire: Evacuate area.
- P403 Store in a well-ventilated place.
- 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>
Diethyl-d <sub>10</sub> Chlorophosphate	141870-47-5	> 97

### **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:** No data available

**Most important symptoms and effects, both acute and delayed:** No data available

### **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, phosphorous oxides.

**Firefighting media and instructions:** Use 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 REFRIGERATED. Adequate ventilation. Protect from heat and ignition sources. Protect from moisture.

### **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:** 172.55 g/mol

**Physical status:** Liquid

**Color:** Colorless

**Odour:** No data available

**Density:** 1.194 g/m<sup>3</sup>

**Melting point:** -60 °C (-76 °F)

**Boiling point:** 81 °C (178 °F) at 8 hPa (6 mmHg)

**Vapour pressure:** 1.3 hPa (1 mmHg) at 25 °C (77 °F)

**Vapour density:** 5.94 (Air = 1)

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

**Water solubility:** Decomposes

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

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

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

**Flash point:** 93 °C (199 °F)

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

**Stability and reactivity:** Stable under recommended storage conditions.

**Incompatibility:** Strong oxidizing agents, strong bases.

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

**Reactivity conditions:** Heat, flames and sparks. Moisture.

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

**Toxicological data:** Diethyl Chlorophosphate

### **Information on ingredients:**

<b><u>Name</u></b>	<b><u>CAS</u></b>	<b><u>LD<sub>50</sub></u></b>	<b><u>LC<sub>50</sub></u></b>
Diethyl Chlorophosphate	814-49-3	Oral - Rat - 11 mg/kg Dermal - Rabbit - 9.5 mg/kg Oral - Mouse - 100 mg/kg	No data available

### **Potential acute effects**

- **Eyes:** Causes serious eye damage.
- **Skin:** Fatal if absorbed through skin. Causes severe skin burns.
- **Inhalation:** No data available.
- **Ingestion:** Fatal if swallowed.

### **Potential chronic effects**

- **Carcinogenic effects:** IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. 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:** No data available.
- **Teratogenic effects:** No data available.
- **Medical conditions aggravated by overexposure:** No data available.

## **Section 12. Ecological information**

### **Ecological data:**

<b><u>Name</u></b>	<b><u>Results</u></b>	<b><u>Species</u></b>	<b><u>Period</u></b>
Diethyl Chlorophosphate	No data available		

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

**Mobility:** No data available.

**Environmental precautions:** No data available.

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

**Bioaccumulative potential:** No data available.

## **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:** Organophosphorus compound, liquid, toxic, n.o.s. (Diethyl Chlorophosphate)

**UN number:** UN3278

**Class:** 6.1

**Packaging group:** I

**Additional information:** None

## **Section 15. Regulatory information**

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



Health: 4  
Flammable: 2  
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** : Not Listed  
**SARA section 313 (specific toxic chemical listings)** : Listed  
**CERCLA reportable quantity** : Not listed  
**Sections 302-304 reportable quantity** : Listed  
**Community Right-to-Know (Sections 311 and 312)** : Not Listed

## **Section 16. Additional information**

**Date of issue:** October 10<sup>th</sup>, 2023

**Version:** 3

**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.*