

# MATERIAL SAFETY DATA SHEET

24 HR. EMERGENCY PHONE # CHEM-TREC 1-800-424-9300

Manufacturer: ProChem, Inc.  
826 Roosevelt Road  
Rockford, IL 61109

Phone: (815) 398-1788  
Fax: (815) 398-1810  
E-Mail: Prochem1@aol.com

---

## SECTION 1 Product Identification

---

**CHEMICAL NAME:** Molybdenum (VI) tetrachlorideoxide.

**CAS #:** 13814-75-0

**FORMULA:** MoOCl<sub>4</sub>

**SYNONYM:** Molybdenum oxychloride. tetrachloromolybdenum oxide.

---

## SECTION 2 Composition and Information on Ingredients

---

INGREDIENT:	CAS #	%	ACGIH (TWA)	OSHA (PEL)
Title Compound	13814-75-0	100	10mg/m <sup>3</sup> (as Mo)	5mg/m <sup>3</sup> (as Mo)

---

## SECTION 3 Hazards Identification

---

**EMERGENCY OVERVIEW:** Corrosive to skin and eyes. Material hydrolyzes in contact with moisture releasing toxic and corrosive fumes of hydrogen chloride and aqueous hydrochloric acid.

**PRIMARY ROUTES OF EXPOSURE:** Contact with skin and eyes. Inhalation of dust.

**EYE CONTACT:** Corrosive to the eyes.

**SKIN CONTACT:** Causes burns to the skin.

**INHALATION:** Forms hydrogen chloride in the presence of moisture. Inhalation leads to burning of the respiratory tract.

**INGESTION:** If large amounts ingested. severe burns to the gastrointestinal tract may occur.

**CHRONIC HEALTH EFFECTS:** No information available on long-term chronic effects.

**ACUTE HEALTH EFFECTS:** Corrosive to skin. eyes and respiratory tract and causes eye. skin burns. dyspnea (breathing difficulty). and pulmonary edema

---

## SECTION 4 First Aid Measures

---

**EYE EXPOSURE:** Immediately flush the eyes with copious amounts of water for at least 15 minutes. Assure flushing under eyelids. A victim may need assistance in keeping their eyelids open. Get immediate competent medical attention.

**SKIN EXPOSURE:** Wash affected area with water. Remove contaminated clothes if necessary. Seek medical assistance if irritation persists.

**INHALATION:** Remove the victim to fresh air. Closely monitor the victim for signs of respiratory problems, such as difficulty in breathing, coughing, wheezing, or pain. In such cases seek immediate medical assistance.

**INGESTION:** Seek medical assistance immediately. Keep the victim calm. Give the victim water (only if conscious). Induce vomiting only if directed by medical personnel.

---

## **SECTION 5                      Firefighting Measures**

---

**FLASH POINT:** no data

**AUTO IGNITION TEMPERATURE:** no data

**EXPLOSION LIMITS:** no data

**EXTINGUISHING MEDIUM:** carbon dioxide, dry powder or foam.

**SPECIAL FIREFIGHTING PROCEDURES:** If involved in a fire, fire fighters should be equipped with a NIOSH approved positive pressure self-contained breathing apparatus and full protective clothing.

**HAZARDOUS COMBUSTION AND DECOMPOSITION PRODUCTS:** If involved in a fire this material may release corrosive hydrogen chloride fumes.

**UNUSUAL FIRE OR EXPLOSION HAZARDS:** No unusual fire or explosion hazards.

---

## **SECTION 6                      Accidental Release Measures**

---

**SPILL AND LEAK PROCEDURES:** Small spills can be neutralized with powdered sodium bicarbonate, lime, or calcium carbonate and swept up. Large spills in areas not adequately ventilated will require an evacuation of site. Emergency response teams will require self-contained breathing apparatus.

---

## **SECTION 7                      Handling and Storage**

---

**HANDLING AND STORAGE:** Store material in a tightly sealed container. Keep away from heat, moisture and direct sunlight. Handle and store under a dry inert atmosphere of nitrogen or argon.

---

## **SECTION 8                      Exposure Controls and Personal Protection**

---

**EYE PROTECTION:** Always wear approved safety glasses w/side shields, or safety goggles, face shield when handling a chemicals substance in the laboratory.

**SKIN PROTECTION:** Chemical-resistant.

**VENTILATION:** If possible, handle the material in an efficient fume hood.

**RESPIRATOR:** If in form of fine dust and ventilation is not available a respirator should be worn. The use of respirators requires a Respirator Protection Program to be in compliance with 29 CFR 19-10.134.

---

## **SECTION 9                      Physical and Chemical Properties**

---

**COLOR AND FORM:** green powder

**MOLECULAR WEIGHT:** 253.78

**MELTING POINT (DEG. C.):** no data

**BOILING POINT:** no data

**VAPOR PRESSURE:** no data

**SPECIFIC GRAVITY:** no data

**SOLUBILITY IN WATER:** soluble

---

## **SECTION 10                    Stability and Reactivity**

---

**STABILITY:** air and moisture stable

**HAZARDOUS POLYMERIZATION:** no hazardous polymerization  
**CONDITIONS TO AVOID:** contact with air and moisture.  
**INCOMPATIBILITY:** active metals, water, alcohols, reducing agents.  
**DECOMPOSITION PRODUCTS:** molybdenum oxides, chlorine and hydrogen chloride

---

## **SECTION 11 Toxicological Information**

---

**RTECS DATA:** No information available in the RTECS files.  
**MUTAGENIC EFFECTS:** no data  
**TETRATOGENIC EFFECTS:** no data  
**CARCINOGENIC EFFECTS:** no data

To the best of our knowledge the toxicological effects of this compound have not been fully investigated.

---

## **SECTION 12 Ecological Information**

---

**ECOLOGICAL INFORMATION:** No information available

---

## **SECTION 13 Disposal Considerations**

---

**DISPOSAL:** Dispose of in according to local state and federal regulations.

---

## **SECTION 14 Transportation Information**

---

Corrosive solids, n.o.s., Class 8, UN 1759, PG II

---

## **SECTION 15 Regulatory Information**

---

**TSCA:** Not listed in the TSCA inventory  
**SARA (TITLE 313):** Title compound : See category N420 for reporting.

---

## **SECTION 16 Other Information**

---

**DISCLAIMER:** The information herein is believed to be accurate and reliable as of the date compiled. However, ProChem, Inc. makes no representation, warranty, or guarantee of any kind with respect to the information in this document or any use of the product based on the information.

**DATE PREPARED:** 2/06