



MATERIAL SAFETY DATA SHEET

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Poison Center

Section 1: Product Identification

Chemical Name: Dimethylcadmium, min. 97% (10 wt% solution in hexane)
Product Number: 48-5041
CAS Registry Number: 506-82-1
Formula: (CH₃)₂Cd
EINECS Number: 208-055-4
Chemical Family: metal alkyl
Synonym: None

Section 2: Composition and Information on Ingredients

Ingredient	CAS Number	Percent	ACGIH (TWA)	OSHA (PEL)
Title Compound	506-82-1	10%	0.002mg/m ³	0.005 mg/m ³
hexane	73513-42-5	90%	50ppm	1800mg/m ³

Section 3: Hazards Identification

Emergency Overview: Extremely flammable liquid. Vapors irritating to eyes and respiratory tract. Cadmium is very toxic. May cause cancer. Possible risk of irreversible effects.

Primary Routes of Exposure: Ingestion, inhalation, eyes and skin.

Eye Contact: Direct contact of liquid with the eyes will cause irritation and possible blindness.

Skin Contact: Harmful and irritating in contact with skin. Residue upon evaporation of hexane may burst into flame causing thermal burns.

Inhalation: Harmful by inhalation. Vapors may depress the central nervous system causing dizziness, difficulty in walking, and irritation to the lungs.

Ingestion: Harmful by ingestion. Ingestion may lead to sudden nausea, vomiting, bloody diarrhea, weakness, convulsions, and death.

Acute Health Affects: Inhalation of vapors may cause metallic taste, cough, chest pain, fever, chills, pulmonary edema, liver and kidney damage. Poison by ingestion. Possible risk of irreversible damage.

Chronic Health Affects: Long term exposure to cadmium and cadmium compounds may result in kidney damage, anemia, pulmonary fibrosis, emphysema, perforation of the nasal septum, loss of smell, male reproductive effects, and an increased risk of cancer of the lungs, prostate, and liver.

NTP: Yes
IARC: Yes
OSHA: No

SECTION 4: First Aid Measures

Eye Exposure: Immediately flush the eyes with copious amounts of water for at least 10-15 minutes. A victim may need assistance in keeping their eye lids open. Get immediate medical attention.

Skin Exposure: Wash the 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 attention immediately. Keep the victim calm. Give the victim water (only if conscious). Induce vomiting only if directed by medical personnel.

SECTION 5: Fire Fighting Measures

Flash Point: -14.8°F (hexane)
 Autoignition Temperature: no data available
 Explosion Limits: LEL (1.7%) UEL (7.7%)
 Extinguishing Medium: Vermiculite, sand, dry chemical. Use no water
 Special Fire Fighting Procedures: If this product is 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 emit toxic fumes containing cadmium.
 Unusual Fire or Explosion Hazards: Extremely flammable.

SECTION 6: Accidental Release Measures

Spill and Leak Procedures: Remove sources of ignition. Small spills can be mixed with vermiculite, sodium carbonate or other suitable non combustible adsorbent and swept up.

SECTION 7: Handling and Storage

Handling and Storage: Handle and store the material under an inert atmosphere of nitrogen or argon. Keep away from heat and moisture.

SECTION 8: Exposure Controls and Personal Protection

Eye Protection: Always wear approved safety glasses when handling a chemical substance in the laboratory.
 Skin Protection: Wear protective clothing and gloves.
 Ventilation: Material will react with air and moisture. Handle the material under an inert atmosphere of nitrogen or argon in an efficient fume hood.
 Respirator: If 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 1910.134.
 Ventilation: Material will react with air and moisture. Handle the material under an inert atmosphere of nitrogen or argon in an efficient fume hood.
 Additional Protection: Wear full face shield, lab apron and suitable gloves.

SECTION 9: Physical and Chemical Properties

Color and Form: colorless liq.
 Molecular Weight: 142.88
 Melting Point: no data
 Boiling Point: 68° (hexane)
 Vapor Pressure: no data
 Specific Gravity: no data
 Odor: pungent odor
 Solubility in Water: reacts with water

SECTION 10: Stability and Reactivity

Stability: air sensitive, moisture sensitive
 Hazardous Polymerization: no hazardous polymerization
 Conditions to Avoid: Contact with air and moisture.
 Incompatibility: Water, alcohols, carbonyl compounds, mineral acids, oxidizing agents, air, and chlorinated hydrocarbons.
 Decomposition Products: carbon monoxide, carbon dioxide, cadmium oxide, and organic fumes.

SECTION 11: Toxicological Information

RTECS Data: No information available on title compound. For hexane--Standard Draize Test(rabbit); 10mg (mild). Inhalation (human); TCLo: 190ppm/8W. Oral (rat); LD50: 28710mg/kg. Inhalation (rat); LC50: 48000ppm/4H. Intraperitoneal (rat); LDLo: 9100mg/kg. Intravenous (mouse); LDLo:831mg/kg. Inhalation (rat); TCLo: 2000ppm/12H/24W-I. Acts a general anesthetic, respiratory depression, altered sleep time, effects on nerves, decreased weight gain, muscle weakness, and changes to the liver and blood. Toxic effects observed in the embryo and fetus of test animals.

Carcinogenic Effects: No data available
 Mutagenic Effects: For hexane: Possible mutagen
 Tetratogenic Effects: For hexane: Possible reproductive effector

SECTION 12: Ecological Information

Ecological Information: No information available

SECTION 13: Disposal Considerations

Disposal: Dispose of according to local, state and federal regulations.

SECTION 14: Transportation

Shipping Name (CFR): Flammable liquids, N.O.S.
 Hazard Class (CFR): 3
 Additional Hazard Class (CFR): NA
 Packaging Group (CFR): II
 UN ID Number (CFR): UN# 1993
 Shipping Name (IATA): Flammable liquid, N.O.S.
 Hazard Class (IATA): 3
 Additional Hazard Class (IATA): NA
 Packaging Group (IATA): II
 UN ID Number (IATA): UN# 1993

SECTION 15: Regulatory Information

TSCA: Not listed in TSCA inventory
 SARA (Title 313): Title compound: See category N078 for reporting.
 Second Ingredient: Hexane: listed on TSCA. Reportable under SARA 313.
 Third Ingredient: None

SECTION 16: Other Information

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

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