

## CADMIUM CHLORIDE

## Material Safety Data Sheet

Mallinckrodt Chemical, Inc.

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Emergency Telephone Number  
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## PRODUCT IDENTIFICATION:

Synonyms: Cadmium dichloride; cadmium chloride, hydrate (2:5)

Formula CAS No.: 10108-64-2

Molecular Weight: 228.35

Hazardous Ingredients: Cadmium chloride

Chemical Formula:  $\text{CdCl}_2 \cdot 5/2 \text{H}_2\text{O}$ 

## PRECAUTIONARY MEASURES

DANGER! CONTAINS CADMIUM. CANCER HAZARD. AVOID CREATING DUST. CAN CAUSE LUNG AND KIDNEY DISEASE. MAY BE FATAL IF SWALLOWED OR INHALED. HARMFUL IF ABSORBED THROUGH SKIN. MAY CAUSE IRRITATION TO SKIN AND EYES.

Do not breathe dust.

Avoid contact with eyes, skin and clothing.

Keep container closed.

Do not enter storage areas unless adequately ventilated.

Use with adequate ventilation.

Wash thoroughly after handling.

## EMERGENCY FIRST AID

If swallowed, induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. In all cases call a physician. SEE SECTION 5.

## Physical Data

## SECTION 1

Appearance: Granules or leaflets.

Odor: Odorless.

Solubility: Freely soluble in water.

Boiling Point: 960 C (1760 F).

Vapor Density (Air=1): No information found.

Melting Point: 568 C (1054 F).

Vapor Pressure (mm Hg): 10 @ 656 C (1213 F).

Density: 3.33

Evaporation Rate: No information found.

NFPA Ratings: Health: 3 Flammability: 0 Reactivity: 0

## Fire and Explosion

## SECTION 2

## Information

Fire: Not considered to be a fire hazard.

Explosion: Not considered to be an explosion hazard.

Fire Extinguishing Media: Use any means suitable for extinguishing surrounding fire.

Special Information: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

## Reactivity Data

## SECTION 3

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Stability:

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Stable under ordinary conditions of use and storage.

Hazardous Decomposition  
Products:

Oxides of the contained metal and halogen, possibly also free, or ionic halogen.

## Hazardous Polymerization:

This substance does not polymerize.

## Incompatibilities:

Bromine trifluoride, potassium.

## Leak/Spill Disposal Information

## SECTION 4

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Clean-up personnel require protective clothing and respiratory protection from dust. Collect by scooping, mopping or wet vacuuming as appropriate. Collected waste may be transferred to a closed, preferably metal, container and sent to a RCRA-approved waste disposal facility. Do not flush to the sewer.

Reportable Quantity (RQ) (CWA/CERCLA) : 10 lbs.

Ensure compliance with local, state and federal regulations.

## Health Hazard Information

## SECTION 5

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A. Exposure/Health Effects-----  
Inhalation:

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Cadmium absorption is most efficient via respiratory tract. Inhalation of dust may produce irritation, headache, metallic taste and/or cough. Severe exposures may produce shortness of breath, chest pain, and flu-like symptoms with weakness, fever, headache, chills, sweating and muscular pain. Symptoms from inhalation may be delayed for as much as 24 hours.

## Ingestion:

Toxic. Ingested cadmium salts may cause severe and sometimes fatal poisonings. Symptoms can include severe nausea, vomiting, diarrhea, abdominal pains, choking, dizziness, and salivation. Kidney and liver dysfunction may occur.

## Skin Contact:

May cause irritation. May be absorbed through the skin with symptoms similar to those from inhalation.

## Eye Contact:

May cause irritation.

## Chronic Exposure:

Chronic exposure to cadmium, even at relatively low concentrations, may result in kidney damage and an increased risk of cancer of the lung and of the prostate. Decrease in bone density, renal stones, and other evidence of disturbed calcium metabolism may be observed.

## Aggravation of

## Pre-existing Conditions:

Persons with pre-existing skin disorders or eye problems, or impaired liver, kidney or respiratory function may be more susceptible to the effects of the substance.

## B. FIRST AID

Inhalation: Remove to fresh air. Get medical attention for any breathing difficulty.

Ingestion: Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person.

Skin Exposure: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Call a physician immediately.

Eye Exposure: Wash eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

## C. TOXICITY (RTECS, 1994)

Oral rat LD50: 88 mg/kg; investigated as a tumorigen, mutagen, and reproductive effector. Cancer status: IARC category 2A; NTP listed carcinogen.

## Occupational Control Measures SECTION 6

Airborne Exposure Limits: -OSHA Threshold Limit Value (PEL): 5 ug/m<sup>3</sup> (TWA)  
 -ACGIH Threshold Limit Value (TLV): 0.01 mg/m<sup>3</sup> total dust, 0.002 mg/m<sup>3</sup> respirable fraction for cadmium and compounds, as Cd; listed as A2, suspected human carcinogen

Ventilation System: A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, "Industrial Ventilation, A Manual of Recommended Practices", most recent edition, for details.

Personal Respirators (NIOSH Approved) If the PEL is exceeded, a half-mask air-purifying respirator equipped with a high efficiency particulate absolute (HEPA) filter, may be worn up to concentrations of 50 ug per cubic meter (10X PEL). See OSHA Standard for additional information.

Skin Protection: Wear protective gloves and clean body-covering clothing.

Eye Protection: Use chemical safety goggles. Contact lenses should not be worn when working with this material. Maintain eye wash fountain and quick-drench facilities in work area.

## Storage and Special Information SECTION 7

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Wear special protective equipment (Sec. 6) for maintenance break-in or where exposures may exceed established exposure levels. Wash hands, face, forearms and neck when exiting restricted areas. Shower, dispose of outer clothing, change to clean garments at the end of the day. Avoid cross-contamination of street clothes. Wash hands before eating and do not eat, drink, or smoke in workplace. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

\*\*\*\*\*  
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# Addendum to Material Safety Data Sheet

## REGULATORY STATUS

This Addendum Must Not Be  
 Detached from the MSDS  
 Identifies SARA 313 substance(s)

Any copying or redistribution of the MSDS  
 must include a copy of this addendum

## Hazard Categories for SARA Section 311/312 Reporting

Acute	Chronic	Fire	Pressure	Reactive
----- X	----- X	-----	-----	-----

Product or Components of Product:	SARA EHS		SARA Sec. 313 Chemicals		CERCLA	RCRA
	Sec. 302 RQ	TPQ	Name List	Chemical Category	Sec.103 RQ lbs	Sec. 261.33
----- CADMIUM CHLORIDE Cadmium chloride (10108-64-2) 100% Listed on the TSCA Inventory.	No	No	No	Cadmium compoun 10		No

## PROPOSITION 65 Warning!

This product contains a chemical known to  
 the state of California to cause cancer.

## SARA Section 302 EHS RQ:

Reportable Quantity of Extremely Hazardous Substance, listed at 40 CFR 355.

## SARA Section 302 EHS TPQ:

Threshold Planning Quantity of Extremely Hazardous substance. An asterisk (\*) following a Threshold Planning Quantity signifies that if the material is a solid and has a particle size equal to or larger than 100 micrometers, the Threshold Planning Quantity = 10,000 LBS.

## SARA Section 313 Chemicals:

Toxic Substances subject to annual release reporting requirements  
 listed at 40 CFR 372.65.

## CERCLA Sec. 103:

Comprehensive Environmental Response, Compensation and Liability Act (Superfund)  
 Releases to air, land or water of these hazardous substances which exceed the  
 Reportable Quantity (RQ) must be reported to the National Response Center,  
 (800-424-8802); Listed at 40 CFR 302.4

RCRA:

Resource Conservation and Recovery Act. Commercial chemical product wastes designated as acute hazards or toxic under 40 CFR 261.33

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