

MSDS# 03740

Section 1 - Chemical Product and Company Identification

MSDS Name: Cadmium chloride

Catalog Numbers: AC219140000, AC219140100, AC219141000, AC219145000, AC296330000, AC296330050
AC296330050, AC296330250, AC315270000, AC315270050, AC315271000, C10-100, C10-500
Synonyms: Cadmium dichloride.

Company Identification: Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410

For information in the US, call: 201-796-7100
Emergency Number US: 201-796-7100
CHEMTREC Phone Number, US: 800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#: 10108-64-2
Chemical Name: Cadmium chloride
%: >99
EINECS#: 233-296-7

Hazard Symbols:

T+ N



Risk Phrases:

45 46 60 61 25 26 48/23/25 50/53

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Danger! Hygroscopic (absorbs moisture from the air). Harmful if swallowed. Cancer hazard. May be fatal if inhaled. Contains cadmium. Avoid creating dust. May cause harm to the unborn child. May impair fertility. Severe marine pollutant. May cause eye, skin, and respiratory tract irritation. Can cause lung and kidney disease. Target Organs: Blood, kidneys, liver, lungs, respiratory system, skeletal structures, prostate, reproductive system.

Potential Health Effects

Eye: May cause eye irritation. Exposure to the substance as an aqueous solution may cause irritation and corneal abnormalities.

Skin: May cause skin irritation. May be absorbed through the skin in harmful amounts.

Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea. Exposure may cause severe swelling of face and neck areas with possible death.

Inhalation: May be fatal if inhaled. Irritation may lead to chemical pneumonitis and pulmonary edema. May cause ulceration and perforation of the nasal septum if inhaled in excessive quantities.

Chronic: May cause respiratory tract cancer. Prolonged or repeated exposure may cause permanent bone structure abnormalities. Chronic inhalation may cause nasal septum ulceration and perforation. Chronic inhalation of cadmium compounds has been associated with lung and prostate cancer. The primary target organ for chronic cadmium disease is clearly the kidney. An inhalation study of cadmium chloride in rats exposed 23 hrs/day for 18 mo at 12.5, 25 or 50 ug/m³, as Cd, produced a frequency of primary lung carcinomas of 15.4%, 52.6% and 71.4%, respectively. There were no primary lung carcinomas in the controls.

Section 4 - First Aid Measures

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid.

Skin: In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse.

Ingestion: If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation: POISON material. If inhaled, get medical aid immediately. Remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician:

Antidote: The use of Calcium disodium EDTA as a chelating agent should be determined by qualified medical personnel.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Water runoff can cause environmental damage. Dike and collect water used to fight fire. Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes.

Extinguishing Media: Use extinguishing media most appropriate for the surrounding fire.

Autoignition Temperature: Not applicable.

Flash Point: Not applicable.

Explosion Limits: Lower: Not available

Explosion Limits: Upper: Not available

NFPA Rating: health: 4; flammability: 0; instability: 0;

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Wear a self contained breathing apparatus and appropriate personal protection. (See Exposure Controls, Personal Protection section). Avoid generating dusty conditions. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Minimize dust generation and accumulation. Do not get in eyes, on skin, or on clothing. Do not breathe dust. Use only with adequate ventilation.

Storage: Do not store in direct sunlight. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 - Exposure Controls, Personal Protection

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Cadmium chloride	0.01 mg/m ³ TWA (as Cd); 0.002 mg/m ³ TWA (respirable fraction, as Cd) (listed under Cadmium compounds).	9 mg/m ³ IDLH (dust and fume, as Cd) (listed under Cadmium compounds).	2.5 æg/m ³ Action Level (as Cd); 5 æg/m ³ TWA (as Cd, Do not eat, drink or chew tobacco or gum or apply cosmetics in regulated areas. Carcinogen - dust can cause lung and kidney disease. See 29 CFR

OSHA Vacated PELs: Cadmium chloride: None listed

Engineering Controls:

Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use substance with extreme caution and designate regulated areas for use. See 29CFR 1910.1027 for regulations applying to all occupational exposures to cadmium and cadmium compounds, in all forms.

Exposure Limits

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear impervious gloves.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a

Respirators: NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Crystals

Color: white

Odor: odorless

pH: Not available

Vapor Pressure: 10 mm Hg @ 656 deg C

Vapor Density: Not available

Evaporation Rate: Not available

Viscosity: Not available

Boiling Point: 960 deg C @ 760 mmHg (1,760.00°F)

Freezing/Melting Point: 568 deg C (1,054.40°F)

Decomposition Temperature: Not available

Solubility in water: 1400 g/L (20°C)

Specific Gravity/Density: 4.05 g/cm3 @ 25°C

Molecular Formula: CdCl2

Molecular Weight: 183.31

Section 10 - Stability and Reactivity

Chemical Stability: Stable at room temperature in closed containers under normal storage and handling conditions.

Conditions to Avoid: Dust generation, excess heat.

Incompatibilities with Other Materials: Strong oxidizing agents, bromine trifluoride, sulfur, potassium, selenium, tellurium, hydrogen azide.

Hazardous Decomposition Products: Hydrogen azide, cadmium fumes, chloride fumes, toxic cadmium oxide fumes.

Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#: CAS# 10108-64-2: EV0175000

RTECS:

CAS# 10108-64-2: Oral, mouse: LD50 = 60 mg/kg;

LD50/LC50: Oral, mouse: LD50 = 3.3 mg/kg;

Oral, rat: LD50 = 88 mg/kg;

Other: Skin, guinea pig: LDLo = 233 mg/kg.; Inhalation, dog: LC90 = 420 mg/m3/30M.

Cadmium chloride - California: carcinogen, initial date 10/1/87 (Cadmium compounds). NTP: Known

Carcinogenicity: carcinogen (Cadmium compounds). IARC: Group 1 carcinogen

Other: See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Ecotoxicity: Fish: Bluegill/Sunfish: 1.94ppm; 96H

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

US DOT

Shipping Name: CADMIUM COMPOUNDS

Hazard Class: 6.1

UN Number: UN2570

Packing Group: III

Canada TDG

Shipping Name: CADMIUM COMPOUND (CADMIUM CHLORIDE)

Hazard Class: 6.1

UN Number: UN2570

Packing Group: I

USA RQ: CAS# 10108-64-2: 10 lb final RQ; 4.54 kg final RQ

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: T+ N

Risk Phrases:

R 45 May cause cancer.

R 46 May cause heritable genetic damage.

R 61 May cause harm to the unborn child.

R 25 Toxic if swallowed.

R 26 Very toxic by inhalation.

R 48/23/25 Toxic : danger of serious damage to health by prolonged exposure through inhalation and if swallowed.

R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R 60 May impair fertility.

Safety Phrases:

S 53 Avoid exposure - obtain special instructions before use.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S 60 This material and its container must be disposed of as hazardous waste.

S 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

WGK (Water Danger/Protection)

CAS# 10108-64-2: Not available

Canada

CAS# 10108-64-2 is listed on Canada's DSL List

Canadian WHMIS Classifications: D1A, D2A

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

CAS# 10108-64-2 is listed on Canada's Ingredient Disclosure List

US Federal

TSCA

CAS# 10108-64-2 is listed on the TSCA
Inventory.

Section 16 - Other Information

MSDS Creation Date: 6/08/1999

Revision #9 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.
