

# Material Safety Data Sheet

## Cadmium acetate dihydrate

ACC# 03735

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** Cadmium acetate dihydrate

**Catalog Numbers:** C4-100, C4-500

**Synonyms:** Acetic acid cadmium salt dihydrate; Cadmium diacetate dihydrate.

**Company Identification:**

Fisher Scientific

1 Reagent Lane

Fair Lawn, NJ 07410

**For information, call:** 201-796-7100

**Emergency Number:** 201-796-7100

**For CHEMTREC assistance, call:** 800-424-9300

**For International CHEMTREC assistance, call:** 703-527-3887

### Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
5743-04-4	Cadmium acetate dihydrate	100	unlisted

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

Appearance: white solid.

**Danger!** Can cause lung and kidney disease. Cancer hazard. Contains cadmium. Avoid creating dust. May cause irritation.

**Target Organs:** Kidneys, lungs, skeletal structures, prostate.

#### Potential Health Effects

**Eye:** May cause eye irritation.

**Skin:** May cause skin irritation.

**Ingestion:** May cause irritation of the digestive tract.

**Inhalation:** May cause respiratory tract irritation.

**Chronic:** Prolonged or repeated exposure may cause permanent bone structure abnormalities. May cause kidney injury. Chronic inhalation of cadmium compounds has been associated with lung and prostate cancer.

### Section 4 - First Aid Measures

**Eyes:** Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

**Skin:** Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.

**Ingestion:** If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.

**Inhalation:** Remove from exposure and move to fresh air immediately. Get medical aid.

**Notes to Physician:** Treat symptomatically and supportively.

**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. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

**Extinguishing Media:** For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam.

**Flash Point:** Not available.

**Autoignition Temperature:** Not available.

**Explosion Limits, Lower:** Not available.

**Upper:** Not available.

**NFPA Rating:** (estimated) Health: 2; 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. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions.

## Section 7 - Handling and Storage

**Handling:** Wash thoroughly after handling. Wash hands before eating. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation.

**Storage:** Store in a cool, dry place. Store in a tightly closed container.

## Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:** Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. See 29CFR 1910.1027 for regulations applying to all occupational exposures to cadmium and cadmium compounds, in all forms.

### Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Cadmium acetate dihydrate	0.01 mg/m3 TWA (as Cd); 0.002 mg/m3 TWA (respirable fraction, as Cd) (listed under Cadmium compounds).	none listed	2.5 æg/m3 Action Level (as Cd); 5 æg/m3 PEL (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 1910.1027) (listed under Cadmium compounds).
Cadmium acetate anhydrous	0.01 mg/m3 TWA (as Cd); 0.002 mg/m3 TWA (respirable fraction, as Cd) (listed under Cadmium compounds).	none listed	2.5 æg/m3 Action Level (as Cd); 5 æg/m3 PEL (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 1910.1027) (listed under Cadmium compounds).

**OSHA Vacated PELs:** Cadmium acetate dihydrate: No OSHA Vacated PELs are listed for this chemical. Cadmium acetate anhydrous: No OSHA Vacated PELs are listed for this chemical.

### 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 appropriate gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to minimize contact with skin.

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

**Appearance:** white

**Odor:** acetic odor - weak odor

**pH:** Not available.

**Vapor Pressure:** Not applicable.

**Vapor Density:** 8.0

**Evaporation Rate:** Not applicable.

**Viscosity:** Not applicable.

**Boiling Point:** Decomposes.

**Freezing/Melting Point:** 266 deg F

**Decomposition Temperature:** Not available.

**Solubility:** Soluble in water.

**Specific Gravity/Density:** 2.01

**Molecular Formula:** (CH3COO)2Cd.2H2O

**Molecular Weight:** 266.4764

## Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures.

**Conditions to Avoid:** Dust generation, confined spaces.

**Incompatibilities with Other Materials:** Strong oxidizing agents, strong acids, and strong bases.

**Hazardous Decomposition Products:** Cadmium fumes.

**Hazardous Polymerization:** Has not been reported.

## Section 11 - Toxicological Information

**RTECS#:**

**CAS#** 5743-04-4: AF7505000

**CAS#** 543-90-8: EU9810000

**LD50/LC50:**

**CAS#** 5743-04-4:

Oral, rat: LD50 = 360 mg/kg;

CAS# 543-90-8:  
Oral, rat: LD50 = 333 mg/kg;

**Carcinogenicity:**

CAS# 5743-04-4:

- **ACGIH:** A2 - Suspected Human Carcinogen (listed as 'Cadmium compounds').
- **California:** carcinogen, initial date 10/1/87 (listed as Cadmium compounds).
- **NTP:** Known carcinogen (listed as Cadmium compounds).
- **IARC:** Group 1 carcinogen (listed as Cadmium compounds).

CAS# 543-90-8:

- **ACGIH:** A2 - Suspected Human Carcinogen (listed as 'Cadmium compounds').
- **California:** carcinogen, initial date 10/1/87 (listed as Cadmium compounds).
- **NTP:** Known carcinogen (listed as Cadmium compounds).
- **IARC:** Group 1 carcinogen (listed as Cadmium compounds).

**Epidemiology:** NIOSH cited recent epidemiological evidence of a significant increase excess of respiratory cancer deaths among a cohort of cadmium production and concluded that cadmium and its compounds are potential carcinogens.

**Teratogenicity:** No data available.

**Reproductive Effects:** No data available.

**Mutagenicity:** No data available.

**Neurotoxicity:** No data available.

**Other Studies:**

## Section 12 - Ecological Information

No information available.

## Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

**RCRA P-Series:** None listed.

**RCRA U-Series:** None listed.

## Section 14 - Transport Information

	US DOT	Canada TDG
<b>Shipping Name:</b>	CADMIUM COMPOUNDS	No information available.
<b>Hazard Class:</b>	6.1	
<b>UN Number:</b>	UN2570	
<b>Packing Group:</b>	III	

## Section 15 - Regulatory Information

### US FEDERAL

#### TSCA

CAS# 5743-04-4 is not on the TSCA Inventory because it is a hydrate. It is considered to be listed if the CAS number for the anhydrous form is on the inventory (40CFR720.3(u)(2)).

CAS# 543-90-8 is listed on the TSCA inventory.

#### Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

#### Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

#### Section 12b

None of the chemicals are listed under TSCA Section 12b.

#### TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

#### CERCLA Hazardous Substances and corresponding RQs

CAS# 543-90-8: 10 lb final RQ; 4.54 kg final RQ

#### SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

#### SARA Codes

CAS # 5743-04-4: immediate, delayed.

#### Section 313

This material contains Cadmium acetate dihydrate (listed as Cadmium compounds), 100%, (CAS# 5743-04-4) which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

This material contains Cadmium acetate anhydrous (listed as Cadmium compounds), -, (CAS# 543-90-8) which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

**Clean Air Act:**

CAS# 5743-04-4 (listed as Cadmium compounds) is listed as a hazardous air pollutant (HAP).

CAS# 543-90-8 (listed as Cadmium compounds) is listed as a hazardous air pollutant (HAP).

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

**Clean Water Act:**

CAS# 543-90-8 is listed as a Hazardous Substance under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA. CAS# 5743-04-4 is listed as a Toxic Pollutant under the Clean Water Act. CAS# 543-90-8 is listed as a Toxic Pollutant under the Clean Water Act.

**OSHA:**

None of the chemicals in this product are considered highly hazardous by OSHA.

**STATE**

CAS# 5743-04-4 can be found on the following state right to know lists: California, (listed as Cadmium compounds), Pennsylvania, (listed as Cadmium compounds), Minnesota, (listed as Cadmium compounds).

CAS# 543-90-8 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, (listed as Cadmium compounds), Massachusetts.

**California Prop 65****The following statement(s) is(are) made in order to comply with the California Safe Drinking Water Act:**

WARNING: This product contains Cadmium acetate dihydrate, listed as 'Cadmium compounds', a chemical known to the state of California to cause cancer. WARNING: This product contains Cadmium acetate anhydrous, listed as 'Cadmium compounds', a chemical known to the state of California to cause cancer.

California No Significant Risk Level: None of the chemicals in this product are listed.

**European/International Regulations****European Labeling in Accordance with EC Directives****Hazard Symbols:**

XN N

**Risk Phrases:**

R 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.

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

**Safety Phrases:**

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# 5743-04-4: No information available.

CAS# 543-90-8: 3

**Canada - DSL/NDSL**

CAS# 543-90-8 is listed on Canada's DSL List.

**Canada - WHMIS**

This product has a WHMIS classification of 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.

**Canadian Ingredient Disclosure List**

CAS# 5743-04-4 (listed as Cadmium compounds) is listed on the Canadian Ingredient Disclosure List.

CAS# 543-90-8 is listed on the Canadian Ingredient Disclosure List.

**Section 16 - Additional Information**

**MSDS Creation Date:** 12/12/1997

**Revision #4 Date:** 2/17/2004

*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 Fisher 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 Fisher has been advised of the possibility of such damages.*