

Material Safety Data Sheet

Cadmium sulfate

ACC# 00345

Section 1 - Chemical Product and Company Identification

MSDS Name: Cadmium sulfate**Catalog Numbers:** AC270560000, AC270561000, AC270565000, AC403760000, AC403760050, AC403765000, C19-100, C19-500, C20-500**Synonyms:** Cadmium sulphate.**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
10124-36-4	Cadmium sulfate	99+	233-331-6

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: white solid.

Danger! Toxic if swallowed. Danger of serious damage to health by prolonged exposure through inhalation and if swallowed. May be fatal if inhaled. May impair fertility. May cause harm to the unborn child. Cancer hazard. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. May cause eye, skin, and respiratory tract irritation. May cause heritable genetic damage. Hygroscopic (absorbs moisture from the air).

Target Organs: Blood, kidneys, liver, lungs, respiratory system, skeletal structures.**Potential Health Effects****Eye:** May cause eye irritation.**Skin:** May cause skin irritation. May be harmful if absorbed through the skin.**Ingestion:** May cause irritation of the digestive tract. Ingestion of large amounts may cause nausea, vomiting, diarrhea, and abdominal discomfort. Toxic if swallowed.**Inhalation:** May be fatal if inhaled. May cause respiratory tract irritation. May cause dyspnea (difficult or labored breathing). Inhalation may produce coughing, nausea, and pulmonary edema.

Chronic: Repeated inhalation may cause chronic bronchitis. Prolonged or repeated exposure may cause permanent bone structure abnormalities. May cause liver and kidney damage. May cause fetal effects. May cause cancer in humans. May cause anemia and other blood cell abnormalities. Chronic inhalation may cause pulmonary emphysema. Chronic inhalation may cause pulmonary fibrosis. Laboratory experiments have resulted in mutagenic effects. Inhalation of dust may cause chronic rhinitis (inflammation of the mucous membrane of the nose). May cause kidney damage. May alter genetic material. May impair fertility.

Section 4 - First Aid Measures

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

Skin: Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion: POISON material. If swallowed, get medical aid immediately. Only induce vomiting if directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Notes to Physician: Treat symptomatically and supportively.

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. Substance is noncombustible. Dangerous fire hazard in the form of dust when exposed to heat or flame.

Extinguishing Media: Substance is noncombustible; use agent most appropriate to extinguish surrounding fire.

Flash Point: Not applicable.

Autoignition Temperature: Not applicable.

Explosion Limits, Lower: Not available.

Upper: Not available.

NFPA Rating: (estimated) Health: 4; Flammability: 0; Instability: 1

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. Wear a self contained breathing apparatus and appropriate personal protection. (See Exposure Controls, Personal Protection section). Avoid generating dusty conditions. Provide ventilation. Evacuate unnecessary personnel. Do not let this chemical enter the environment.

Section 7 - Handling and Storage

Handling: Minimize dust generation and accumulation. Do not get in eyes, on skin, or on clothing. Do not ingest or inhale. Use only in a chemical fume hood.

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

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use only under a chemical fume hood.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Cadmium sulfate	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 to bacco or gum or apply cosmetics in regulated areas. Carcinogen - dust can cause lung and kidney disease. See 29 CFR 1 910.1027) (listed under Cadmium compounds).

OSHA Vacated PELs: Cadmium sulfate: 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 protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State: Solid

Appearance: white

Odor: odorless

pH: 4.5 - 6 (5% aq. sol.)

Vapor Pressure: Not available.

Vapor Density: Not available.

Evaporation Rate: Not available.

Viscosity: Not available.

Boiling Point: Not available.

Freezing/Melting Point: 41 deg C

Decomposition Temperature: Not available.

Solubility: 1130 g/L @ 20°C

Specific Gravity/Density: Not available.

Molecular Formula:CdO4S

Molecular Weight:210.48

Section 10 - Stability and Reactivity

Chemical Stability: Hygroscopic: absorbs moisture or water from the air.

Conditions to Avoid: Incompatible materials, dust generation, excess heat, exposure to moist air or water.

Incompatibilities with Other Materials: Metals, zinc, selenium, tellurium, hydrogen azide.

Hazardous Decomposition Products: Oxides of sulfur, toxic cadmium oxide fumes.

Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#:

CAS# 10124-36-4: EV2700000

LD50/LC50:

CAS# 10124-36-4:

Oral, mouse: LD50 = 47 mg/kg;

Oral, rat: LD50 = 280 mg/kg;

Carcinogenicity:

CAS# 10124-36-4:

- **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

Epidemiology: IARC Group 1: Proven human carcinogenic substance.

Teratogenicity: Teratogenic effects have occurred in experimental animals.

Reproductive Effects: Adverse reproductive effects have occurred in experimental animals.

Mutagenicity: Mutagenic effects have occurred in humans.

Neurotoxicity: No information found

Other Studies:

Section 12 - Ecological Information

Ecotoxicity: Water flea Daphnia: 0.0050 mg/l; 96H; EC50 No data available.

Environmental: No information available.

Physical: No information available.

Other: Do not empty into drains.

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
Shipping Name:	CADMIUM COMPOUNDS	CADMIUM COMPOUND (CADMIUM SULFATE)
Hazard Class:	6.1	6.1
UN Number:	UN2570	UN2570
Packing Group:	III	III

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 10124-36-4 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

None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 10124-36-4: immediate, delayed.

Section 313

This material contains Cadmium sulfate (listed as Cadmium compounds), 99+%, (CAS# 10124-36-4) which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

Clean Air Act:

CAS# 10124-36-4 (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:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA. CAS# 10124-36-4

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# 10124-36-4 can be found on the following state right to know lists: California, (listed as Cadmium compounds), 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 sulfate, 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:

T+ N

Risk Phrases:

R 25 Toxic if swallowed.

R 26 Very toxic by inhalation.

R 45 May cause cancer.

R 46 May cause heritable genetic damage.

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

R 60 May impair fertility.

R 61 May cause harm to the unborn child.

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

Safety Phrases:

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

S 53 Avoid exposure - obtain special instructions before use.

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# 10124-36-4: 3

Canada - DSL/NDSL

CAS# 10124-36-4 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of 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.

Canadian Ingredient Disclosure List

CAS# 10124-36-4 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 3/06/2000

Revision #6 Date: 3/20/2008

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.