

**Material Safety Data Sheet**

Version 3.0  
Revision Date 08/20/2009  
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**1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : Cadmium fluoride

Product Number : 307637  
Brand : Aldrich

Company : Sigma-Aldrich  
3050 Spruce Street  
SAINT LOUIS MO 63103  
USA

Telephone : +18003255832  
Fax : +18003255052  
Emergency Phone # : (314) 776-6555

**2. COMPOSITION/INFORMATION ON INGREDIENTS**

Formula :  $\text{CdF}_2$   
Molecular Weight : 150.41 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
<b>Cadmium fluoride</b>			
7790-79-6	232-222-0	048-006-00-2	-

**3. HAZARDS IDENTIFICATION****Emergency Overview****OSHA Hazards**

Target Organ Effect, Highly toxic by inhalation, Toxic by ingestion, Carcinogen

**Target Organs**

Kidney injury may occur., Damage to the lungs., Kidney, Lungs

**HMIS Classification**

Health Hazard: 4  
Chronic Health Hazard: \*  
Flammability: 0  
Physical hazards: 0

**NFPA Rating**

Health Hazard: 4  
Fire: 0  
Reactivity Hazard: 0

**Potential Health Effects**

**Inhalation** May be fatal if inhaled. May cause respiratory tract irritation.  
**Skin** May be harmful if absorbed through skin. May cause skin irritation. May be fatal

**Eyes**  
**Ingestion**

if absorbed through skin.  
May cause eye irritation.  
Toxic if swallowed.

#### 4. FIRST AID MEASURES

**General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**If inhaled**

If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician.

**In case of skin contact**

Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact**

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed**

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

#### 5. FIRE-FIGHTING MEASURES

**Flammable properties**

Flash point not applicable

Ignition temperature no data available

**Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Special protective equipment for fire-fighters**

Wear self contained breathing apparatus for fire fighting if necessary.

#### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions**

Wear respiratory protection. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. Evacuate personnel to safe areas.

**Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

**Methods for cleaning up**

Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

#### 7. HANDLING AND STORAGE

**Handling**

Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

**Storage**

Keep container tightly closed in a dry and well-ventilated place.

Keep in a dry place.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Update	Basis
Cadmium fluoride	7790-79-6	TWA	2.5 mg/m3	1993-06-30	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		TWA	2.5 mg/m3	1993-06-30	USA. Occupational Exposure Limits (OSHA) - Table Z2
Remarks	Z37.28-1969				
		TWA	2.5 mg/m3	1989-03-01	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
	See Table Z-2.				
		TWA	2.5 mg/m3	1994-09-01	USA. ACGIH Threshold Limit Values (TLV)
	Substances for which there is a Biological Exposure Index or Indices (see BEI® section)				
		TWA	0.002 mg/m3	1994-09-01	USA. ACGIH Threshold Limit Values (TLV)
	<p>Suspected human carcinogen: Human data are accepted as adequate in quality but are conflicting or insufficient to classify the agent as a confirmed human carcinogen; OR, the agent is carcinogenic in experimental animals at dose(s), by route(s) of exposure, at site(s), of histologic type(s), or by mechanism(s) considered relevant to worker exposure. The A2 is used primarily when there is limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals with relevance to humans.</p> <p>Inhalable fraction. See Appendix C, paragraph A. Inhalable Particulate Mass TLVs (IPM-TLVs) for those materials that are hazardous when deposited anywhere in the respiratory tract.</p> <p>Substances for which there is a Biological Exposure Index or Indices (see BEI® section)</p> <p>Substances for which the TLV is higher than the OSHA Permissible Exposure Limit (PEL) and/or the NIOSH Recommended Exposure Limit (REL). See CFR 58(124) :36338-33351, June 30, 1993, for revised OSHA PEL.</p> <p>Substance identified by other sources as a suspected or confirmed human carcinogen. Refers to Appendix A -- Carcinogens.</p>				
		TWA	0.01 mg/m3	2007-01-01	USA. ACGIH Threshold Limit Values (TLV)
	<p>Kidney damage Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Suspected human carcinogen: Human data are accepted as adequate in quality but are conflicting or insufficient to classify the agent as a confirmed human carcinogen; OR, the agent is carcinogenic in experimental animals at dose(s), by route(s) of exposure, at site(s), of histologic type(s), or by mechanism(s) considered relevant to worker exposure. The A2 is used primarily when there is limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals with relevance to humans. varies</p>				

		TWA	0.002 mg/m <sup>3</sup>	2007-01-01	USA. ACGIH Threshold Limit Values (TLV)
	Kidney damage Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Suspected human carcinogen: Human data are accepted as adequate in quality but are conflicting or insufficient to classify the agent as a confirmed human carcinogen; OR, the agent is carcinogenic in experimental animals at dose(s), by route(s) of exposure, at site(s), of histologic type(s), or by mechanism(s) considered relevant to worker exposure. The A2 is used primarily when there is limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals with relevance to humans. varies				

### Personal protective equipment

#### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N99 (US) or type P2 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### Hand protection

Handle with gloves.

#### Eye protection

Face shield and safety glasses

#### Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

#### Hygiene measures

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

Form	powder
Colour	white

### Safety data

pH	no data available
Melting point	no data available
Boiling point	no data available
Flash point	not applicable
Ignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Density	6.33 g/mL at 25 °C (77 °F)
Water solubility	no data available

## 10. STABILITY AND REACTIVITY

**Storage stability**

Stable under recommended storage conditions.

**Materials to avoid**

Oxidizing agents

**Hazardous decomposition products**

Hazardous decomposition products formed under fire conditions. - Hydrogen fluoride, Cadmium/cadmium oxides

**11. TOXICOLOGICAL INFORMATION****Acute toxicity**

LD50 Oral - guinea pig - 150 mg/kg

**Irritation and corrosion**

no data available

**Sensitisation**

no data available

**Chronic exposure**

Carcinogen

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Cadmium fluoride)

2A - Group 2A: Probably carcinogenic to humans (Cadmium fluoride)

1 - Group 1: Carcinogenic to humans (Cadmium fluoride)

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Cadmium fluoride)

2A - Group 2A: Probably carcinogenic to humans (Cadmium fluoride)

1 - Group 1: Carcinogenic to humans (Cadmium fluoride)

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Cadmium fluoride)

2A - Group 2A: Probably carcinogenic to humans (Cadmium fluoride)

1 - Group 1: Carcinogenic to humans (Cadmium fluoride)

NTP: Known to be human carcinogenThe reference note has been added by Royal Haskoning based on the background information of the NTP. (Cadmium fluoride)

OSHA: 1910.1027 (Cadmium fluoride)

**Signs and Symptoms of Exposure**

Salivation, Nausea, Vomiting, Fever, Kidney injury may occur., Damage to the lungs.

**Potential Health Effects****Inhalation**

May be fatal if inhaled. May cause respiratory tract irritation.

**Skin**

May be harmful if absorbed through skin. May cause skin irritation. May be fatal if absorbed through skin.

**Eyes**

May cause eye irritation.

**Ingestion**

Toxic if swallowed.

**Target Organs**

Kidney injury may occur., Damage to the lungs., Kidney, Lungs,

**Additional Information**

RTECS: EV0700000

**12. ECOLOGICAL INFORMATION**

**Elimination information (persistence and degradability)**

no data available

**Ecotoxicity effects**

no data available

**Further information on ecology**

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

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

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**13. DISPOSAL CONSIDERATIONS****Product**

Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

**Contaminated packaging**

Dispose of as unused product.

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**14. TRANSPORT INFORMATION**

**DOT (US)**

**IMDG**

**IATA**

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**15. REGULATORY INFORMATION****OSHA Hazards**

Target Organ Effect, Highly toxic by inhalation, Toxic by ingestion, Carcinogen

**DSL Status**

This product contains the following components listed on the Canadian NDSL list. All other components are on the Canadian DSL list.

Cadmium fluoride

CAS-No.  
7790-79-6

**SARA 302 Components**

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components**

Cadmium fluoride

CAS-No.  
7790-79-6

Revision Date  
1987-01-01

**SARA 311/312 Hazards**

Acute Health Hazard, Chronic Health Hazard

**Massachusetts Right To Know Components**

No components are subject to the Massachusetts Right to Know Act.

**Pennsylvania Right To Know Components**

Cadmium fluoride

CAS-No.  
7790-79-6

Revision Date  
1987-01-01

**New Jersey Right To Know Components**

Cadmium fluoride

CAS-No.  
7790-79-6

Revision Date  
1987-01-01

**California Prop. 65 Components**

WARNING! This product contains a chemical known in the State of California to cause cancer.  
Cadmium fluoride

CAS-No.  
7790-79-6

Revision Date  
1987-10-01

**California Prop. 65 Components**

WARNING! This product contains a chemical known in the State of California to cause birth defects or other reproductive harm.  
Cadmium fluoride

CAS-No.  
7790-79-6

Revision Date  
1987-10-01

**16. OTHER INFORMATION****Further information**

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Co., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.