

## Material Safety Data Sheet

Version 3.2  
Revision Date 01/19/2012  
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### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Cadmium fluoride

Product Number : 307637

Brand : Aldrich

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

Telephone : +1 800-325-5832

Fax : +1 800-325-5052

Emergency Phone # (For both supplier and manufacturer) : (314) 776-6555

Preparation Information : Sigma-Aldrich Corporation  
Product Safety - Americas Region  
1-800-521-8956

### 2. HAZARDS IDENTIFICATION

#### Emergency Overview

##### OSHA Hazards

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

##### Target Organs

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

##### GHS Classification

Acute toxicity, Oral (Category 3)  
Acute toxicity, Inhalation (Category 2)  
Germ cell mutagenicity (Category 1B)  
Carcinogenicity (Category 1B)  
Reproductive toxicity (Category 1B)  
Specific target organ toxicity - repeated exposure (Category 1)  
Acute aquatic toxicity (Category 1)  
Chronic aquatic toxicity (Category 1)

##### GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

H301 Toxic if swallowed.  
H330 Fatal if inhaled.  
H340 May cause genetic defects.  
H350 May cause cancer.  
H360 May damage fertility or the unborn child.  
H372 Causes damage to organs through prolonged or repeated exposure.  
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P201 Obtain special instructions before use.

P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  
P273 Avoid release to the environment.  
P284 Wear respiratory protection.  
P310 Immediately call a POISON CENTER or doctor/ physician.  
P501 Dispose of contents/ container to an approved waste disposal plant.

#### HMIS Classification

Health hazard: 3  
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.  
**Eyes** May cause eye irritation.  
**Ingestion** Toxic if swallowed.

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

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

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

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### 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. Take victim immediately to hospital. Consult a physician.

#### In case of eye contact

Flush eyes with water as a precaution.

#### If swallowed

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

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### 5. FIREFIGHTING MEASURES

#### Conditions of flammability

Not flammable or combustible.

#### Suitable extinguishing media

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

#### Special protective equipment for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

#### Hazardous combustion products

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

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions

Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

### 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 and materials for containment and cleaning up

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

## 7. HANDLING AND STORAGE

### Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

### Conditions for safe 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	Basis
Cadmium fluoride	7790-79-6	TWA	2.5 mg/m <sup>3</sup>	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		TWA	2.5 mg/m <sup>3</sup>	USA. ACGIH Threshold Limit Values (TLV)
		TWA	2.5 mg/m <sup>3</sup>	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		TWA	2.5 mg/m <sup>3</sup>	USA. Occupational Exposure Limits (OSHA) - Table Z2
		TWA	0.0020 mg/m <sup>3</sup>	USA. ACGIH Threshold Limit Values (TLV)
Remarks	Suspected human carcinogen			
		TWA	0.01 mg/m <sup>3</sup>	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 varies			
		TWA	0.002 mg/m <sup>3</sup>	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 varies			
		TWA	2.5 mg/m <sup>3</sup>	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
	Varies with compound			
		TWA	2.5 mg/m <sup>3</sup>	USA. Occupational Exposure Limits (OSHA) - Table Z2
	Z37.28-1969			
		TWA	2.5 mg/m <sup>3</sup>	USA. ACGIH Threshold Limit Values (TLV)

	Bone damage Fluorosis Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Not classifiable as a human carcinogen varies			
		TWA	2.5 mg/m3	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
	Potential Occupational Carcinogen See Appendix A			
	Potential Occupational Carcinogen See Appendix A			

## Personal protective equipment

### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (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. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

### Eye protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

### Skin and body protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

### 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/freezing point	no data available
Boiling point	no data available
Flash point	not applicable
Ignition temperature	no data available
Autoignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Vapour pressure	no data available
Density	6.33 g/cm3 at 25 °C (77 °F)
Water solubility	no data available
Partition coefficient: n-octanol/water	no data available
Relative vapour	no data available

density	
Odour	no data available
Odour Threshold	no data available
Evaporation rate	no data available

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## 10. STABILITY AND REACTIVITY

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

no data available

### Conditions to avoid

no data available

### Materials to avoid

Oxidizing agents

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Hydrogen fluoride, Cadmium/cadmium oxides  
Other decomposition products - no data available

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## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

#### Oral LD50

LD50 Oral - guinea pig - 150 mg/kg

#### Inhalation LC50

#### Dermal LD50

no data available

#### Other information on acute toxicity

no data available

### Skin corrosion/irritation

no data available

### Serious eye damage/eye irritation

no data available

### Respiratory or skin sensitization

no data available

### Germ cell mutagenicity

In vivo tests showed mutagenic effects

### Carcinogenicity

Carcinogen

Possible human 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)

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)  
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)  
1 - Group 1: Carcinogenic to humans (Cadmium fluoride)  
NTP: Known to be human carcinogenThe reference note has been added by TD based on the background information of the NTP. (Cadmium fluoride)  
OSHA: 1910.1027 (Cadmium fluoride)

### **Reproductive toxicity**

no data available

### **Teratogenicity**

Presumed human reproductive toxicant

### **Specific target organ toxicity - single exposure (Globally Harmonized System)**

no data available

### **Specific target organ toxicity - repeated exposure (Globally Harmonized System)**

Causes damage to organs through prolonged or repeated exposure.

### **Aspiration hazard**

no data available

### **Potential health effects**

<b>Inhalation</b>	May be fatal if inhaled. May cause respiratory tract irritation.
<b>Ingestion</b>	Toxic if swallowed.
<b>Skin</b>	May be harmful if absorbed through skin. May cause skin irritation.
<b>Eyes</b>	May cause eye irritation.

### **Signs and Symptoms of Exposure**

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

### **Synergistic effects**

no data available

### **Additional Information**

RTECS: EV0700000

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## **12. ECOLOGICAL INFORMATION**

### **Toxicity**

no data available

### **Persistence and degradability**

no data available

### **Bioaccumulative potential**

no data available

### **Mobility in soil**

no data available

### **PBT and vPvB assessment**

no data available

**Other adverse effects**

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

Very toxic to aquatic life with long lasting effects.

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

Offer surplus and non-recyclable solutions to a licensed disposal company. 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)**

UN number: 2570 Class: 6.1 Packing group: II  
Proper shipping name: Cadmium compounds (Cadmium fluoride)  
Reportable Quantity (RQ):  
Marine pollutant: No  
Poison Inhalation Hazard: No

**IMDG**

UN number: 2570 Class: 6.1 Packing group: II EMS-No: F-A, S-A  
Proper shipping name: CADMIUM COMPOUND (Cadmium fluoride)  
Marine pollutant: No

**IATA**

UN number: 2570 Class: 6.1 Packing group: II  
Proper shipping name: Cadmium compound (Cadmium fluoride)

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

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

**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**

The following components are subject to reporting levels established by SARA Title III, Section 313:

	CAS-No.	Revision Date
Cadmium fluoride	7790-79-6	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**

	CAS-No.	Revision Date
Cadmium fluoride	7790-79-6	1987-01-01

**New Jersey Right To Know Components**

	CAS-No.	Revision Date
Cadmium fluoride	7790-79-6	1987-01-01

**California Prop. 65 Components**

	CAS-No.	Revision Date
WARNING! This product contains a chemical known to the State of California to cause cancer. Cadmium fluoride	7790-79-6	1987-10-01

**California Prop. 65 Components**

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

CAS-No.  
7790-79-6

Revision Date  
1987-10-01

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

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