

# Safety Data Sheet per OSHA HazCom 2012

	Reviewed on 03/02/2015
1 Identification	
Product identifier	
Product name: Cadmium fluoride	
Stock number: B20103 CAS Number: 7790-79-6 EC number: 232-222-0 Index number: 048-006-00-2	
Relevant identified uses of the substance or mixture and uses advised aga Identified use: SU24 Scientific research and development	inst.
Details of the supplier of the safety data sheet Manufacturer/Supplier: Alfa Aesar Thermo Fisher Scientific Chemicals, Inc. 30 Bond Street Ward Hill, MA 01835-8099 Tel: 800-343-0660 Fax: 800-322-4757	
Email: tech@alfa.com www.alfa.com	
Information Department: Health, Safety and Environmental Department Emergency telephone number:	
During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0	660. After normal business hours, call Carechem 24 at (866) 928-0789.
2 Hazard(s) identification	
Classification of the substance or mixture in accordance with 29 CFR 1910	(OSHA HCS)
GHS06 Skull and crossbones	
Acute Tox. 3 H301 Toxic if swallowed. Acute Tox. 2 H330 Fatal if inhaled.	
GHS08 Health hazard	
Muta. 1B    H340    May cause genetic defects.      Carc. 1B    H350    May cause cancer.      Repr. 1B    H360    May damage fertility or the unborn child.      STOT RE 1    H372    Causes damage to the lung, the kidneys, the reproductive s Oral.	ystem and the blood through prolonged or repeated exposure. Route of exposure:
Hazards not otherwise classified No information known.	
Label elements GHS label elements The product is classified and labeled in accordance with 29 Hazard pictograms GHS06 GHS08	9 CFR 1910 (OSHA HCS)
Signal word Danger      Hazard statements      H301 Toxic if swallowed.      H330 Fatal if inhaled.      H340 May cause genetic defects.      H360 May cause cancer.      H360 May damage fertility or the unborn child.      H372 Causes damage to the lung, the kidneys, the reproductive system and the Precautionary statements      P260    Do not breathe dust/fume/gas/mist/vapours/spray.      P284    [In case of inadequate venilation] wear respiratory protection.      P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor/      P320    Specific treatment is urgent (see on this label).      P401    Dispose of contents/container in accordance with local/regional/nati      WHMIS classification    DIA - Very toxic material causing immediate and serious toxic effects      D2A - Very toxic material causing other toxic effects	
Classification system HMIS ratings (scale 0-4) (Hazardous Materials Identification System) Health (acute effects) = 3 FIRE 0 REACTIVITY Physical Hazard = 1 Other hazards	
Results of PBT and vPvB assessment PBT: Not applicable.	

**PBT:** Not applicable. **vPvB:** Not applicable. Product name: Cadmium fluoride

Page 2/5 Printing date 11/24/2015 Reviewed on 03/02/2015

(Contd. of page 1)

## 3 Composition/information on ingredients

Chemical characterization: Substances CAS# Description: 7790-79-6 Cadmium fluoride Identification number(s): EC number: 232-222-0 Index number: 048-006-00-2

4 First-aid measures	
Description of first aid measures General information Immediately remove any clothing soiled by the product. Remove breathing apparatus only after contaminated clothing has been completely removed. In case of irregular breathing or respiratory arrest provide artificial respiration.	
After inhalation Supply fresh air. If required, provide artificial respiration. Keep patient warm. Seek immediate medical advice.	
After skin contact Immediately wash with water and soap and rinse thoroughly.	
Seek immediate medical advice. After eye contact Rinse opened eye for several minutes under running water. Then consult a doctor.	
After swallowing Do not induce vomiting; immediately call for medical help. Information for doctor Most important symptoms and effects, both acute and delayed No further relevant information available.	
Indication of any immediate medical attention and special treatment needed No further relevant information available.	
5 Fire-fighting measures Extinguishing media Suitable extinguishing agents Product is not flammable. Use fire-fighting measures that suit the surrounding fire. Special hazards arising from the substance or mixture If this product is involved in a fire, the following can be released: Hydrogen fluoride (HF) Cadmum oxide Advice for firefighters Protective equipment: Wear self-contained respirator. Wear fully protective impervious suit.	
6 Accidental release measures	
Personal precautions, protective equipment and emergency procedures Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation Environmental precautions: Do not allow product to reach sewage system or any water course. Methods and material for containment and cleaning up: Dispose of contaminated material as waste according to section 13. Ensure adequate ventilation. Prevention of secondary hazards: No special measures required. Reference to other sections See Section 7 for information on safe handling See Section 8 for information on personal protection equipment. See Section 13 for disposal information.	
7 Handling and storage	
Handling Precautions for safe handling	
Keep container tightly sealed. <sup>-</sup> Store in cool, dry place in tightly closed containers. Ensure good ventilation at the workplace.	
Open and handle container with care. Information about protection against explosions and fires: The product is not flammable	
Conditions for safe storage, including any incompatibilities Storage	
Requirements to be met by storerooms and receptacles: No special requirements. Information about storage in one common storage facility: Store away from oxidizing agents.	
Store away from oxidizing agents. Store away from alkali metals. Further information about storage conditions:	
Keep container tightly sealed. Store in cool, dry conditions in well sealed containers. <b>Specific end use(s)</b> No further relevant information available.	
8 Exposure controls/personal protection	
Additional information about design of technical systems: Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.	
Control parameters Components with limit values that require monitoring at the workplace:	
7790-79-6 Cadmium fluoride (100.0%)	
PEL (USA) Long-term value: 0.005 mg/m <sup>3</sup> as Cd; see 29 CFR 1910.1027	
REL (USA) See Pocket Guide App. A TLV (USA) Long-term value: 0.01 0.002* mg/m <sup>3</sup> as Cd; *respirable fraction; BEI	
EL (Canada) Long-term value: 0.01 mg/m <sup>3</sup>	
as Čd; ACIGH A1, IARC <sup>*</sup> 1	(Contd. on page 3)

(Contd. of page 2)

Product name: Cadmium fluoride

Ingredients with biological limit values:

### 7790-79-6 Cadmium fluoride (100.0%)

5 µg/g creatinine Medium: urine BEI (USA)

Time: not critical Parameter: Cadmium (background)

## 5 µg/L Medium: blood

Time: not critical Parameter: Cadmium (background)

Additional information: No data

#### Exposure controls

Exposure controls Personal protective equipment General protective and hygienic measures The usual precautionary measures for handling chemicals should be followed. Keep away from foodstuffs, beverages and feed. Remove all soiled and contaminated clothing immediately. Wash hands before breaks and at the end of work. Store protective clothing separately. Maintain an ergonomically appropriate working environment. Breathing equipment: Use self-contained respiratory protective device in emergency situations. Recommended filter device for short term use: Use a respirator with type P100 (USA) or P3 (EN 143) cartridges as a backup to engineering controls. Risk assessment should be performed to determine if air-purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards. Protection of hands: Impervious gloves

Impervious gloves Check protective gloves prior to each use for their proper condition. The selection of suitable gloves not only depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer. Eye protection: Safety glasses Body protection: Protective work clothing.

#### 9 Physical and chemical properties

Information on basic physical and chemical properties General Information Appearance: Form: Color: Powder or chunks White Odor: Odor threshold: Odorless Not determined pH-value: Not applicable Change in condition Melting point/Melting range: Boiling point/Boiling range: Sublimation temperature / start: Flammability (solid, gaseous) Ignition temperature: Decomposition temperature: Auto inviting: 1100 °C (2012 °F) 1758 °C (3196 °F) Not determined Not determined Not determined Not determined Auto igniting: Not determined. Danger of explosion: Explosion limits: Lower: Not determined. Not determined Upper: Not determined 

 Upper:
 Not determined

 Vapor pressure:
 Not applicable.

 Density at 20 °C (68 °F):
 6.64 g/cm³ (55.4

 Relative density
 Not determined.

 Vapor density
 Not determined.

 Evapor density
 Not applicable.

 Solubility in / Miscibility with
 Not applicable.

 Water at 25 °C (77 °F):
 43.5 g/l

 Partition coefficient (n-octanol/water): Not determined.

Not applicable. 6.64 g/cm³ (55.411 lbs/gal) Not determined. Viscosity: dynamic: kinematic: Not applicable. Not applicable. No further relevant information available. Other information

### 10 Stability and reactivity

Reactivity No information known. Chemical stability Stable under recommended storage conditions. Thermal decomposition / conditions to be avoided: Decomposition will not occur if used and stored according to specifications. Possibility of hazardous reactions Reacts with strong oxidizing agents Conditions to avoid No further relevant information available.

Discompatible materials: Oxidizing agents Alkali metals Hazardous decomposition products:

Hydrogen fluoride Cadmium oxide

#### 11 Toxicological information

Information on toxicological effects

Acute toxicity: Fatal if inhaled. Toxic if swallowed.

The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for this substance

LD/LC50 values that are relevant for classification:

Oral LD50 150 mg/kg (guinea pig)

(Contd. on page 4)

Safety Data Sheet per OSHA HazCom 2012	Page 4/5 Printing date 11/24/2015 Reviewed on 03/02/2015	
Product name: Cadmium fluoride		
Skin irritation or corrosion: May cause irritation Eye irritation or corrosion: May cause irritation Sensitization: No sensitizing effects known. Germ cell mutagenicity: May cause genetic defects. Carcinogenicity: May cause cancer. IARC-1: Carcinogenic to humans: sufficient evidence of carcinogenicity. EPA-B1: Probable human carcinogen, limited evidence of carcinogenicity from Carcinogen as defined by OSHA. ACGIH A2: Suspected human carcinogen: Agent is carcinogenic in experimer or by mechanism(s) considered relevant to worker exposure. Available epide. exposed humans. NTP-K: Known to be carcinogenic: sufficient evidence from human studies. Reproductive toxicity: May damage fertility or the unborn child. Specific target organ system toxicity - repeated exposure: Causes damage to the lung, the kidneys, the reproductive system and the blo Specific target organ system toxicity - single exposure: No effects known. Aspiration hazard: No effects known. Subacute to chronic toxicity: No effects known. Additional toxicological information: To the best of our knowledge the acut	ntal animals at dose levels, by route(s) of administration, at site(s), of histologic type(s), miologic studies are conflicting or insufficient to confirm an increased risk of cancer in od through prolonged or repeated exposure. Route of exposure: Oral.	
12 Ecological information      Toxicity      Aquatic toxicity: No further relevant information available.      Persistence and degradability No further relevant information available.      Bioaccumulative potential No further relevant information available.      Mobility in soil No further relevant information available.      Ecotoxical effects:      Remark: Very toxic for aquatic organisms      Additional ecological information:      General notes:      Do not allow product to reach ground water, water course or sewage system, even in small quantities.      Danger to drinking water if even extremely small quantities leak into the ground.      Also poisonous for fish and plankton in water bodies.      May cause long lasting harmful effects to aquatic life.      Avoid transfer into the environment.      Very toxic for aquatic organisms      Results of PBT and vPvB assessment      PBT: Not applicable.      VHPvB: Not applicable.      Other adverse effects No further relevant information available.      13 Disposal considerations      Waste treatment methods      Recommendation Consult state, local or national regulations to ensure proper disposal.		
Uncleaned packagings: Recommendation: Disposal must be made according to official regulations. 14 Transport information		
UN-Number		
DOT, IMDG, IATA UN proper shipping name DOT IMDG IATA	UN2570 Cadmium compounds (Cadmium fluoride) CADMIUM COMPOUND (Cadmium fluoride), MARINE POLLUTANT CADMIUM COMPOUND (Cadmium fluoride)	
Transport hazard class(es) DOT Class Label Class Label IMDG	6.1 Toxic substances. 6.1 6.1 (T5) Toxic substances 6.1	
Class Label IATA	6.1 Toxic substances. 6.1	
Çlass	6.1 Toxic substances.	
Label Packing group	6.1	
Packing group DOT, IMDG, IATA Environmental hazards:	II Environmentally hazardous substance, solid; Marine Pollutant	
Marine pollutant (IMDG):	Symbol (fish and tree) Warning: Toxic substances	
Special precautions for user EMS Number:	F-A,S-Ă	
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Co	ide Not applicable.	

(Contd. on page 5) USA

Safety Data Sheet per OSHA HazCom 2012	Page 5/5 Printing date 11/24/2015 Reviewed on 03/02/2015
Product name: Cadmium fluoride	
	(Contd. of page 4)
Transport/Additional information: DOT	
DOT Marine Pollutant (DOT): Remarks:	No Special marking with the symbol (fish and tree).
UN "Model Regulation":	UN2570, Cadmium compounds (Cadmium fluoride), 6.1, II
15 Regulatory information	i
Safety, health and environmental regulations/legislatio GHS label elements The product is classified and labeled Hazard pictograms	<i>on specific for the substance or mixture</i> d in accordance with 29 CFR 1910 (OSHA HCS)
GHS06 GHS08	
GHS06    GHS08      Signal word Danger    Hazard statements      H301    Toxic if swallowed.      H301    Fatal if inhaled.      H301    Toxic if swallowed.      H301    GHscales.      H302    Observed.      H304    Getause.      H305    Do not breathed uskifune/gas/mist/vapours/spray.      P260    Do not breathed uskifune/gas/mist/vapours/spray.      P261    Dispose of contentiner in accordance with local/regional/national/international regulations.      National regulations    All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.      All components of this product are listed on the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.      7790-79-61    Cadinium f	
information to ensure proper use and protect the health an conformance with this Material Safety Data Sheet, or in co	nent to other information gathered by them, and should make independent judgement of suitability of this and safety of employees. This information is furnished without warranty, and any use of the product not in combination with any other product or process, is the responsibility of the user.
Department issuing SDS: Global Marketing Department Date of preparation / last revision 11/24/2015 / - Abbreviations and acronyms: ADR: Accord européen sur le transport des marchandises dangereuses par F IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association EINECS: European Inventory of Existing Commercial Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) HMIS: Hazardous Materials Identification System (USA) WHMIS: Workplace Hazardous Materials Information System (Canada) LC50: Lethal concentration, 50 percent LD50: Lethal cose, 50 percent	Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

USA

LOGO: Lotinal dose, 50 percent VPUB: very Persistent and very Bioaccumulative ACGIH: American Conference of Governmental Industrial Hygienists (USA) OSHA: Occupational Safety and Health Administration (USA) NTP: National Toxicology Program (USA) IARC: International Agency for Research on Cancer EPA: Environmental Protection Agency (USA)