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## MATERIAL SAFETY DATA SHEET

### Section 1- PRODUCT IDENTIFICATION

COMPOSITION <b>CeF<sup>3</sup></b>	PRODUCT NAME <b>Cerium Fluoride, Cerous Fluoride &amp; Cerium Tri-Fluoride</b>
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### Section 2- HAZARDOUS INGREDIENTS

Note: Products under normal conditions do not represent an inhalation, ingestion or contact health hazard.

MATERIAL OR COMPONENT	CAS NUMBER	WT%	EXPOSURE LIMITS	
			OSHA PEL (Mg/M3)	ACGIH TLV(MG/M3)
<b>CeF<sup>3</sup></b>	<b>7758-88-5</b>	<b>100%</b>	<b>2.5mg/m3 (as F)</b>	<b>2.5mg/m3 (as F)</b>

### Section 3- PHYSICAL DATA

MATERIAL IS (AT NORMAL CONDITIONS) <input type="checkbox"/> Liquid <input type="checkbox"/> Solid <input type="checkbox"/> Gas <input type="checkbox"/> Other	APPEARANCE AND ODOR <b>White hexagonal crystals. Odorless.</b>
MELTING POINT (BASE METAL) <b>1460 °C</b>	SPECIFIC GRAVITY <b>6.16gm/cc</b>

### Section 4- FIRE AND EXPLOSION

Flash Point (Method Used) <b>N/A</b>	Flammable Limits <b>Non Flammable</b>	LEL <b>N/A</b>	UEL <b>N/A</b>
EXTINGUISHING MEDIA <b>Dry chemical- (Co<sup>2</sup>)</b>			
SPECIAL FIRED FIGHTING PROCEDURES <b>Wear a self-contained breathing apparatus and full protective clothing to prevent contact with skin and eyes.</b>			
UNUSUAL FIRE AND EXPLOSION HAZARDS <b>When heated to decomposition it emits toxic fumes of F.</b>			

### Section 5- REACTIVITY DATA

STABILITY <b>Stable</b>	INCOMPATIBILITY (MATERIALS TO AVOID) <b>None</b>
CONDITIONS TO AVOID <b>Heat and flame</b>	
HAZARDOUS DECOMPOSITION PRODUCTS <b>May emit highly toxic fumes of F; if comes in contact with strong acids or it is heated to decomposition.</b>	

## Section 6- HEALTH HAZARD GUIDE

MAJOR EXPOSURE HAZARD

**Inhalation**  **Skin**  **Skin Absorption**  **Eye Contact**  **Ingestion**

EFFECTS OF OVEREXPOSURE

**INHALATION:** Inhalation of  $CeF^3$  may be irritation to the respiratory tract. Inorganic fluorides are generally highly irritating and toxic. Inhalation may cause irritation to the mucous membrane and respiratory tract.

**DERMAL/EYE CONTACT:**  $CeF^3$  may be mechanically irritation the skin and eyes. It may cause redness and watering of the eyes.

**OTHER:** Acute effects resulting from exposure to fluorine compounds are due to the hydrogen fluorine. Chronic exposure may cause "fluorosis", which consists of sclerosis of the bones, caused by fixation of the calcium by fluorine. There may also be some calcification of the ligaments. It may cause osteosclerosis and osteomalacia. Large doses can cause very severe vomiting, nausea, diarrhea, abdominal burning and cramp like pains. It can cause or aggravate attacks of asthma; can cause severe bone changes, making normal movement more painful. Some signs of pulmonary fibrosis are noted. Also, loss of weight, anorexia, anemia, wafting and cachexia, and dental defects are common in fluorine poisoning. Symptoms of intoxication include gastric, intestinal, circulatory, respiratory, nervous complaints and skin rashes.

**MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:** Respiratory disorders

EMERGENCY & FIRST AID PROCEDURES

**INHALATION:** Remove from exposed area to fresh air immediately and give oxygen if breathing is difficult. Seek medical attention.

**EYE CONTACT:** Wash eyes immediately with water occasionally lifting upper and lower lids.

**INGESTION:** Give 1-2 glasses of milk or water to induce vomiting.

**SKIN CONTACT:** Brush off skin and wash area with soap and water.

## Section 7- SPILL OR LEAK PROCEDURES

SPILL OR LEAK PROCUDRES

**Wear a self-contained breathing apparatus and full protective clothing. Isolate the area of the spill and insure proper ventilation. Vacuum up spill using high efficiency unit and place in container for proper disposal. Do not raise dust during clean up.**

WASTE DISPOSAL METHODS

**Dispose of in accordance with applicable Federal, State & Local regulations.**

## Section 8- SPECIAL PROTECTION

RESPIRATORY

**Wear NIOSH-approved dust-mist-fume cartridge respirator.**

VENTILATION

**Local exhaust: maintain exposure below TLV level for F. Mechanical ventilation recommended. Handle in a controlled environment.**

EYE PROTECTION & PROTECTIVE CLOTHING

**Wear safety glasses, neoprene gloves and protective clothing to prevent contamination of skin and clothes.**

## Section 9- SPECIAL PRECAUTIONS

**Store in tightly closed containers in a cool, dry place. Wash hands and face thoroughly after handling and before eating.**

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