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## MATERIAL SAFETY DATA SHEET

### Section 1- PRODUCT IDENTIFICATION

COMPOSITION <b>Er</b>	PRODUCT NAME <b>Erbium</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>Erbium</b>	<b>7440-52-0</b>	<b>&gt;99</b>	<b>10mg/ m<sup>3</sup> (TWA) total dust</b>	<b>15mg/m<sup>3</sup> total dust 5mg/m<sup>3</sup></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>Silver,(ingot,chunk,foil &amp; powder) odorless</b>
MELTING POINT (BASE METAL) <b>2784° F Boiling Point: 5185°F</b>	SPECIFIC GRAVITY <b>9.07</b>

### Section 4- FIRE AND EXPLOSION

Flash Point (Method Used) <b>N/A</b>	Flammable Limits <b>N/A</b>	LEL <b>N.A.</b>	UEL <b>N.A.</b>
EXTINGUISHING MEDIA <b>(1) Dry Chemical (2) Class D extinguisher. DO NOT USE WATER</b>			
SPECIAL FIRED FIGHTING PROCEDURES <b>Wear NIOSH/MSHA approved self-contained breathing apparatus with full protective clothing.</b>			
UNUSUAL FIRE AND EXPLOSION HAZARDS <b>Avoid creating fine dusts because as a powder, this product is capable of creating an explosion.</b>			

### Section 5- REACTIVITY DATA

STABILITY <b>Stable. Air &amp; Moisture sensitive</b>	INCOMPATABILITY (MATERIALS TO AVOID) <b>Strong acids, strong oxidizing materials &amp; halogens.</b>
CONDITIONS TO AVOID <b>N/A</b>	
HAZARDOUS DECOMPOSITION PRODUCTS <b>The nature of decomposition products is not known.</b>	

## Section 6- HEALTH HAZARD GUIDE

### MAJOR EXPOSURE HAZARD

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

### EFFECTS OF OVEREXPOSURE

**INHALATION:** May be harmful if inhaled. Good industrial hygiene practice suggests limiting exposure to all respirable particulates.

**INGESTION:** Evidence suggests low toxicity potential due to poor absorption by the oral route.

**SKIN CONTACT:** Evidence suggests low toxicity potential due to poor skin absorption.

**EYE CONTACT:** May cause irritation.

**OTHER:** Has anticoagulant effect when given intravenously.

### EMERGENCY & FIRST AID PROCEDURES

**INHALATION:** Remove from exposed area to fresh air immediately; keep warm and quiet, give oxygen if breathing is difficult. Get immediate medical attention.

**INGESTION:** If swallowed and victim is fully conscious, induce vomiting.

**SKIN CONTACT:** Remove contaminated clothing. Wash affected area with soap or mild detergent.

**EYE CONTACT:** Flush eyes with lukewarm water lifting up the upper and lower lids for at least fifteen minutes. Seek medical attention.

## Section 7- SPILL OR LEAK PROCEDURES

### SPILL OR LEAK PROCEDURES

**Eliminate all sources of ignition. Evacuate area. Wear protective gear. Sweep into appropriate container. Avoid creating dust. Do NOT use "shop vacuum", may cause fire.**

### WASTE DISPOSAL METHODS

**Observe all federal, state and local regulations when storing or disposing.**

## Section 8- SPECIAL PROTECTION

### RESPIRATORY:

**In dusting conditions, use a NIOSH/MSHA approved dust mask.**

### VENTILATION

**Provide adequate ventilation. Use local exhaust as needed to maintain airborne exposure below control limits.**

### EYE PROTECTION & PROTECTIVE CLOTHING

**Use safety glasses with side shields or chemical workers dust proof goggles (under dusting conditions). Wear work clothing and gloves. Maintain a sink, safety shower & eyewash fountain in the work area. Have oxygen readily available.**

## Section 9- SPECIAL PRECAUTIONS

Store in a cool, dry place in tightly closed container. Store away from oxidizers and other materials listed under incompatibility. (Section 5) Store under argon or other inert environment. Avoid breathing dusts. Avoid direct or prolonged contact with skin and eyes. Wash hands thoroughly after handling. Do not eat or smoke in work area.

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