CHINATUNGSTEN

ONLINE MANU. & SALES CORP

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Erbium MSDS

I. PRODUCT IDENTIFICATION

Trade Name: Erbium
Formula: Er
CAS #: 7440-52-0

II. HAZARDOUS INGREDIENTS

Hazardous Components	%	OSHA/PEL	ACGIH/TLV
Erbium	0-100	N/E	N/E
Particulates not otherwise regulated	0-100	15 mg/m^3 (dust), 5 mg/m^3 (resp)	10 mg/m^3 total dust

III. PHYSICAL DATA

Boiling Point: 2868 ^oC
Melting Point: 1529 ^oC
Specific Gravity: 9.07
Vapor Density: N/A
Vapor Pressure: N/A
% Volatiles: 0
Appearance and Odor: Dark gray powder, silver solid, no odor.
Solubility in H_2O: Insoluble

IV. FIRE AND EXPLOSION HAZARDS DATA

Flash Point: N/A
Flammability: Highly flammable
Explosive limits: **Lower**: N/E **Upper**: N/E
Extinguishing Media: Dry chemical, Class D extinguisher. DO NOT USE WATER

Special Firefighting Procedures: Firefighters must wear full face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes.
Unusual Fire and Explosion Hazards: Avoid creating fine dusts, because as a powder, this product is capable of creating a dust explosion. Contact with water will release explosive hydrogen gas. Erbium will react with dilute acids emitting flammable/explosive hydrogen gas.

V. HEALTH HAZARD INFORMATION

Effects of Exposure:

To the best of our knowledge the chemical, physical and toxicological properties of erbium have not been thoroughly investigated and recorded.

Erbium is considered a rare earth metal. These metals are moderately to highly toxic. The symptoms of toxicity of the rare earth elements include writhing, ataxia, labored respiration, walking on the toes with arched back and sedation. The rare earth elements exhibit low toxicity by ingestion exposure. However, the intraperitoneal route is highly toxic while the subcutaneous route is poison to moderately toxic. The production of lung and skin granulomas after exposure to them requires extensive protection to prevent such exposure. (Sax, Dangerous Properties of Industrial Materials.)

Acute Effects:

Inhalation: May cause irritation to the respiratory tract and mucous membrane. Dusts may cause asthma attacks and lung damage such as lung granulomas. Large doses may cause writhing, loss of muscle coordination, labored breathing, sedation, hypotension and cardiovascular collapse.
Ingestion: May cause gastrointestinal irritation.
Skin: May cause irritation, rashes and skin granulomas.
Eye: May cause eye irritation.

Chronic Effects:

Inhalation: Prolonged or repeated inhalation may cause writhing, loss of muscle coordination, labored respiration, sedation, hypotension and cardiovascular collapse.

Ingestion: May affect the coagulation rate of the blood.
Skin: May cause dermatitis, sensitivity to heat, itching and skin lesions.
Eye: No chronic health effects recorded.

Target Organs: May affect the respiratory system, blood and skin.
Medical Conditions Generally Aggravated by Exposure: Pre-existing respiratory disorders.
Carcinogenicity: **NTP**: No **IARC**: No **OSHA**: No

EMERGENCY AND FIRST AID PROCEDURES:

INHALATION: Remove victim to fresh air, keep warm and quiet, give oxygen if breathing is difficult and seek medical attention.
INGESTION: Give 1-2 glasses of milk or water and induce vomiting, seek medical attention. Never induce vomiting or give anything by mouth to an unconscious person.
SKIN: Remove contaminated clothing, brush material off skin, wash with soap and water. Seek medical attention if irritation develops or persists.
EYE: Immediately flush eyes with plenty of water for at least 15 minutes using an eyewash fountain. List upper and lower lids and rinse well under them. Get medical attention if irritation develops or persists.

VI. REACTIVITY DATA

Stability: Stable
Conditions to Avoid: None
Incompatibility (Material to avoid): Air, moisture, acids, oxidizing materials, halogens.
Hazardous Decomposition Products: Hydrogen gas
Hazardous Polymerization: Will not occur.

VII. SPILL OR LEAK PROCEDURES

Steps to Be Taken in Case Material Is Released or Spilled: Wear appropriate respiratory and protective equipment specified in section VIII. Isolate spill area and provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for proper disposal. Take care not to raise dust. Use non-sparking tools.
Waste Disposal Method: Dispose of in accordance with local, state, and federal regulations.

VIII. SPECIAL PROTECTION INFORMATION

Respiratory Protection: NIOSH approved dust respirator.
Ventilation: Handle and store in an inert gas such as argon. Handle in a controlled, dry atmosphere. Use local exhaust to maintain concentration of exposure at low levels. General exhaust is not recommended.
Protective Gloves: Rubber gloves.
Eye Protection: Safety glasses.
Other Protective Clothing or Equipment: Protective gear suitable to prevent contamination.

IX. SPECIAL PRECAUTIONS

Precautions to Be Taken in Handling and Storage: Store in a cool, dry place in tightly closed containers. Air and moisture sensitive. Store away from oxidizers and other materials listed under incompatibility. 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 rub eyes with soiled hands. Do not eat, drink, or smoke in the work area.
Other Precautions: Avoid creating dusts as this product, like most materials in powder form, is capable of creating a dust explosion.
Work Practices: Do not store, use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored. Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet. Wash exposed skin promptly to remove accidentally splashes of contact with this material. Maintain a sink, safety shower and eyewash fountain in the work area. Have oxygen readily available.

Transportation Status:
DOT Regulations:
Solid Forms:
Hazard Class: None
Powder, Pieces and Thin Foil:
Hazard Class: 4.1
Identification Number: UN3178
Packing Group: III
Proper Shipping Name: Flammable solid, inorganic, n.o.s. (Erbium)

OSHA Hazard: Yes
SARA Title III Hazard Classification: Fire Hazard, Reactive Hazard.

Warning Statements: Flammable Solid When a Powder or Thin Foil. All forms will react with dilute acids emitting flammable/explosive hydrogen gas.

The above information is believed to be correct, but does not purport to be all inclusive and shall be used only as a guide. ESPI shall not be held liable for any damage resulting from handling or from contact with the above product.