

Europium



SAFETY DATA SHEET

1 PRODUCT AND SUPPLIER IDENTIFICATION

Product Name: Europium Solid

Formula: Eu

Supplier: ESPI Metals
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Ashland, OR 97520

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Emergency: Infotrac 800-535-5053 (US) or 352-323-3500 (24 hour)

Recommended Uses: Scientific Research

2 HAZARDS IDENTIFICATION

GHS Classification (29 CFR 1910.1200): Flammable solids, category 1.

GHS Label Elements:



Signal Word: Danger

Hazard Statements: H228 Flammable solid.

Precautionary Statements: P210 Keep away from heat/sparks/open flames/hot surfaces - No smoking, P280 Wear protective gloves/protective clothing/eye protection/face protection, P370+P378 In case of fire: Use Class D dry chemical extinguishing agent for extinction.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient: Europium

CAS#: 7440-53-1

%: 100
EC#: 231-161-7

4 FIRST AID MEASURES

General Measures: Remove patient from area of exposure.

INHALATION: Remove to fresh air, keep warm and quiet, give oxygen if breathing is difficult. Seek medical attention.

INGESTION: Quickly wipe material from mouth and rinse with water. Do not induce vomiting. Seek medical attention.

SKIN: Remove contaminated clothing, brush material off skin, wash affected area with soap and water. Seek medical attention if symptoms persist.

EYES: Flush eyes with lukewarm water, including under upper and lower eyelids, for at least 15 minutes. Seek medical attention if symptoms persist.

Most Important Symptoms/Effects, Acute and Delayed: May cause irritation. See section 11 for more information.

Indication of Immediate Medical Attention and Special Treatment: No other relevant information available.

5 FIREFIGHTING MEASURES

Extinguishing Media: Use Class D dry powder extinguishing agent.

Unsuitable Extinguishing Media: Do not use water.

Specific Hazards Arising from the Material: Flammable when exposed to heat, spark or flame. May react with water under fire conditions liberating flammable hydrogen gas. May emit fumes of europium oxides under fire conditions.

Special Protective Equipment and Precautions for Firefighters: Full face, self-contained breathing apparatus and full protective clothing to prevent contact with skin and eyes.

6 ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures: Wear appropriate respiratory and protective equipment specified in section 8. Isolate spill area and provide ventilation. Avoid breathing dust or fume. Avoid contact with skin and eyes. Eliminate all sources of ignition.

Methods and Materials for Containment and Cleaning Up: Avoid dust formation. Sweep or scoop spilled product and place in a closed container for further handling and disposal. Do not use water for spill clean-up. Use only non-sparking tools and natural bristle brushes.

Environmental Precautions: Do not flush to sewer, stream, or other bodies of water. Do not allow to enter drains or to be released to the environment.

7 HANDLING AND STORAGE

Precautions for Safe Handling: Handle under dry protective gas such as argon. Handle in an enclosed, controlled process. Use non-sparking tools. Protect from sources of ignition. Avoid creating dust. Provide adequate ventilation if dusts are created. Avoid breathing dust or fumes. Avoid contact with skin and eyes. Wash thoroughly before eating or smoking. See section 8 for information on personal protection equipment.

Conditions for Safe Storage, Including Any Incompatibilities: Store in tightly-closed containers under argon or mineral oil. Keep away from sparks, heat and flame. Storage area should be free of combustibles and ignition sources. Protect from water/moisture. Do not store together with acids or oxidizers. See section 10 for more information on incompatible materials.

8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Limits: Europium

OSHA/PEL: No exposure limit established

ACGIH/TLV: No exposure limit established

Appropriate Engineering Controls: Handle in an inert gas such as argon. Handle in an enclosed, controlled process. Use local exhaust to maintain exposure at low levels. Whenever possible the use of local exhaust ventilation or other engineering controls is the preferred method of controlling exposure to airborne dust and fume to meet established occupational exposure limits. Do not use tobacco or food in work area. Wash thoroughly before eating or smoking. Do not blow dust off clothing or skin with compressed air. Prepare for the possibility of a fire. Keep extinguishing agents, tools for handling and protective clothing readily available.

Individual Protection Measures, Such as Personal Protective Equipment:

Respiratory Protection: Wear a NIOSH/MSHA approved respirator when high concentrations are present.

Eye Protection: Always wear approved chemical splash proof goggles.

Skin Protection: Rubber gloves, flame retardant protective work clothing.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:

Form: Solid in various forms

Color: Gray metallic

Odor: Not determined

Odor Threshold: Not determined

pH: N/A

Melting Point: 822 °C

Boiling Point: 1527 °C

Flash Point: N/A

Evaporation Rate: N/A

Flammability: Flammable solid

Upper Flammable Limit: No data

Lower Flammable Limit: No data

Vapor Pressure: No data

Vapor Density: N/A

Relative Density (Specific Gravity): 5.25 g/cc

Solubility in H₂O: Decomposes

Partition Coefficient (n-octanol/water): Not determined

Autoignition Temperature: No data

Decomposition Temperature: No data

Viscosity: N/A

10 STABILITY AND REACTIVITY

Reactivity: No data

Chemical Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: Flammable when exposed to heat, spark or flame. May react with acids or water to release flammable hydrogen gas.

Conditions to Avoid: Avoid contact with air or moisture, ignition sources.

Incompatible Materials: Water/moisture, air, strong acids, acid chlorides, strong oxidizing agents, halogens.

Hazardous Decomposition Products: Europium oxides, europium hydroxides, hydrogen gas.

11 TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Inhalation, skin and eyes.

Symptoms of Exposure: May cause irritation.

Acute and Chronic Effects: No data

Acute Toxicity: No data

Carcinogenicity: **NTP:** Not identified as carcinogenic **IARC:** Not identified as carcinogenic

To the best of our knowledge the chemical, physical and toxicological characteristics of the substance are not fully known.

12 ECOLOGICAL INFORMATION

Ecotoxicity: No data

Persistence and Degradability: No data

Bioaccumulative Potential: No data

Mobility in Soil: No data

Other Adverse Effects: Do not allow material to be released to the environment. No further relevant information available.

13 DISPOSAL CONSIDERATIONS

Waste Disposal Method:

Product: Dispose of in accordance with Federal, State and Local regulations.

Packaging: Dispose of in accordance with Federal, State and Local regulations.

14 TRANSPORT INFORMATION

UN Number: UN3132

UN Proper Shipping Name: Water reactive solid, flammable, n.o.s. (Europium)

Transport Hazard Class: 4.3 (4.1)

Packing Group: III

Marine Pollutant: No

Special Precautions: Warning: Substances which, in contact with water, emit flammable gases.

15 REGULATORY INFORMATION

TSCA Listed: All components are listed.

Regulation (EC) No 1272/2008 (CLP): Flammable solids, category 1.

Canada WHMIS Classification (CPR, SOR/88-66): Flammable solids.

HMIS Ratings: Health: 1 Flammability: 3 Physical: 1

NFPA Ratings: Health: 1 Flammability: 3 Instability: 1

Chemical Safety Assessment: A chemical safety assessment has not been carried out.

16 OTHER INFORMATION

The information contained in this document is based on the state of our knowledge at the time of publication and is believed to be correct, but does not purport to be all inclusive and shall be used only as a guide. ESPI Metals makes no representation, warranty, or guarantee of any kind with respect to the information contained in this document or any use of the product based on this information. ESPI Metals shall not be held liable for any damages resulting from handling or from contact with the above product. Users should satisfy themselves that they have all current data relevant to their particular use.

Prepared by: ESPI Metals

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