

# SAFETY DATA SHEET

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## SECTION 1. IDENTIFICATION

**Product Identifier:** (5N) 99.999% Barium Hafnium Oxide

**Product Code:** BA-HFO-05

**CAS Number:** 151640-29-8

**Relevant identified uses of the substance:** Scientific research and development

Supplier details:

American Elements  
10884 Weyburn Ave.  
Los Angeles, CA 90024  
Tel: +1 310-208-0551  
Fax: +1 310-208-0351  
Emergency telephone number:  
+1 800-424-9300

## SECTION 2. HAZARDS IDENTIFICATION

Signal Word: Warning



Hazard Statements:

H302+H332: Harmful if swallowed or if inhaled

Precautionary Statements:

P261 Avoid breathing dust/fume/gas/mist/vapors/spray.

P264: Wash thoroughly after handling

P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

P312: Call a POISON CENTER or doctor/physician if you feel unwell

P501: Dispose of contents/container in accordance with local/regional/national/international regulations

HMIS Health Ratings (0-4):

Health: 2

Flammability: 0

Physical: 1

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## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Family: Ceramic

Additional Names: Barium hafnate

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## SECTION 4. FIRST AID MEASURES

General Treatment:

Seek medical attention if symptoms persist.

Special Treatment:

None

Important Symptoms:

None

Inhalation:

Remove victim to fresh air. Supply oxygen if breathing is difficult.

Ingestion:

Seek Medical Attention.

Skin:

Wash affected area with mild soap and water. Remove any contaminated clothing.

Eyes:

Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing

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## SECTION 5. FIREFIGHTING MEASURES

Flammability:

Non-flammable

Extinguishing Media:

No special restrictions –use suitable extinguishing agent for surrounding material and type of fire.

Spec. Fire Fighting Procedure:

Use full-face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes.

See section 10 for decomposition products.

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## SECTION 6. ACCIDENTAL RELEASE MEASURES

If Material Is Released/Spilled:

Wear appropriate respiratory and protective equipment specified in special protection information. 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 disposal.

Take care not to raise dust.

Environmental Precautions:

Isolate runoff to prevent environmental pollution.

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## SECTION 7. HANDLING AND STORAGE

### Handling Conditions:

Handle under dry protective gas. Wash thoroughly after handling.

### Storage Conditions:

Store in a cool dry place in a tightly sealed container. Handle under dry inert gas. Store apart from materials and conditions listed in section 10.

### Work/Hygienic Maintenance:

Do not use tobacco or food in work area. Wash thoroughly before eating and smoking. Do not blow dust off clothing or skin with compressed air.

### Ventilation:

Provide sufficient ventilation to maintain concentration at or below threshold limit.

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## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Permissible Exposure Limits:

0.5mg/m<sup>3</sup> as Ba/Hf, long-term value

### Threshold Limit Value:

0.5 mg/m<sup>3</sup> as Ba/Hf, long-term value

### Special Equipment:

None

### Respiratory Protection:

Use a respirator with type N95 (USA) or PE (EN 143) cartridges as a backup to engineering controls. Risk assessment should be performed to determine if purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards.

### Protective Gloves:

Nitrile rubber

### Eye Protection:

Safety glasses or goggles

### Body Protection:

Protective work clothing. Wear close-toed shoes and long sleeves/pants.

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## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Color: Grey-white

Form: Powder, Granules, Pellets, Sputtering target, Custom parts

Odor: Odorless

Water Solubility: N/A

Boiling Point: N/A

Melting Point: N/A

Flash Point: N/A

Autoignition Temperature: N/A

Density: N/A

Molecular weight: N/A

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## SECTION 10. STABILITY AND REACTIVITY

### Stability:

Stable under recommended storage conditions

### Reacts With:

Oxidizing agents  
Incompatible Conditions:  
Water/moisture  
Hazardous Decomposition Products:  
Metal oxide fume

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## **SECTION 11. TOXICOLOGICAL INFORMATION**

Potential Health Effects:  
Eyes: May cause irritation  
Skin: May cause irritation  
Ingestion: Harmful  
Inhalation: Harmful  
Chronic: N/A  
Signs & Symptoms: N/A  
Aggravated Medical Conditions: N/A  
Median Lethal Dose: N/A  
Carcinogen: N/A

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## **SECTION 12. ECOLOGICAL INFORMATION**

Aquatic Toxicity: Low  
Persistent Bioaccumulation Toxicity: No  
Very Persistent, Very Bioaccumulative: No  
Notes: N/A

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## **SECTION 13. DISPOSAL CONSIDERATIONS**

Dispose of in accordance with local, state, national, and international regulations.

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## **SECTION 14. TRANSPORT INFORMATION**

Hazardous: Not hazardous for transportation.  
Hazard Class: N/A  
Packing Group: N/A  
UN Number: N/A  
Proper Shipping Name: N/A

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## **SECTION 15. REGULATORY INFORMATION**

Sec 302 Extremely Hazardous: No  
Sec 304 Reportable Quantities: N/A  
Sec 313 Toxic Chemicals:  
Component: Barium oxide

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## 16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. American Elements shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. COPYRIGHT 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.