

CERIUM

SAFETY DATA SHEET

DATE OF LAST REVISION: 06/22/15

Section 1: Identification

Product Name: Cerium
CAS Number: 7440-45-1 / **EC Number:** 231-154-9
Company: Angstrom Sciences, Inc.
40 South Linden Street
Duquesne, PA 15110
For more information call: 412-469-8466
(Monday - Friday 9:00-5:00 EST)

Section 2: HAZARD IDENTIFICATION

Signal Word: Danger



Hazard Statements:

H228 Flammable solid
H260: In contact with water releases flammable gases which may ignite spontaneously.

Precautionary Statements:

P210: Keep away from heat/sparks/open flames/hot surfaces - No smoking
P231 + 232: Handle under inert gas. Protect from moisture.
P280: Wear protective gloves/protective clothing/eye protection/face protection
P370 + P378: In case of fire: Use CO₂, sand, extinguishing powder for extinction.
P402 + 404: Store in a dry place Store in a closed container.
P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

CERIUM
SAFETY DATA SHEET

HMIS Health Ratings (0-4):	Powder	Bulk
Health:	1	1
Flammability:	3	3
Physical	3	2

Section 3: Composition/Information on Ingredients

Chemical characterization: Ceramic

Additional Names: None

Percentage: 100 wt%

CAS# Description: 7440-45-1

EC number: 231-154-9

Section 4: FIRST AID MEASURES

General Treatment: Seek medical attention if symptoms persist.

Special Treatment: None

Important Symptoms: None

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

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

Inhalation: Remove to fresh air. If required, give artificial respiration. Seek medical advice.

Ingestion: Seek medical treatment.

Section 5: FIRE FIGHTING MEASURES

Flammability: Flammable, contact with water releases extremely flammable gases.

Special 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.

Extinguishing Media: Do not use water for metal fires - use CO₂, sand, extinguishing powder.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: 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.

Section 7: HANDLING AND STORAGE

Handling Precautions for safe handling: Handle under dry protective gas. Wash thoroughly after handling.

CERIUM
SAFETY DATA SHEET

Conditions for safe storage, including any incompatibilities Store in a cool dry place in a tightly sealed container. 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.

Section 8: EXPOSURE CONTROL/PERSONAL PROTECTION

Permissible Exposure Limits:	0.1 mg/m ³ as Co, for metal dust and fume, long-term value
Threshold Limit Value:	0.02 mg/m ³ as Co, long-term value
Special Equipment:	None
Respiratory Protection:	Dust respirator
Protective Gloves:	Rubber Gloves
Eye Protection:	Safety glasses or goggles
Body Protection:	Protective work clothing. Wear close-toed shoes and long sleeves/pants.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:

Form:	Powder, Granules, Pellets, Sputtering target, Custom parts
Color:	Dark grey
Odor:	Odorless
Water Solubility:	Contact with water releases flammable gas.
Boiling Point:	3433° C
Melting Point:	798°C
Flash Point:	N/A
Autoignition Temperature:	N/A
Density:	6.77 g/cc
Molecular Weight:	140.12 g/mol

Section 10: STABILITY AND REACTIVITY

Reactivity:	Halogens, Oxidizing Agents
Chemical Stability:	Stable under recommended storage conditions
Incompatible Conditions:	Air, Water/moisture
Hazardous Decomposition Products:	Metal oxide fume, Cerium oxide

Section 11: TOXICOLOGICAL INFORMATION

Potential Health Effects:
Eyes: May cause irritation

CERIUM
SAFETY DATA SHEET

Skin: May cause irritation

Ingestion: May cause irritation

Inhalation: May cause irritation

Chronic: N/A

Signs & Symptoms: N/A

Aggravated Medical Conditions: N/A

Median Lethal Dose: N/A

Carcinogen: N/A

Section 12: ECOLOGICAL INFORMATION

Aquatic Toxicity: Low

Persistence Bioaccumulation Toxicity: No

Very Persistent, Very Bioaccumulative: No

Notes: N/A

Section 13: DISPOSAL CONSIDERATIONS

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

Section 14: TRANSPORT INFORMATION

Hazardous: Hazardous for transportation as powder.



Hazard Class: 4.3 Substances which, in contact with water, emit flammable gases.

Packing Group: II

UN Number: UN3078

Proper Shipping Name: Cerium

CERIUM
SAFETY DATA SHEET

Hazardous: As bulk



Hazard Class: 4.1 Flammable solids, self-reactive substances and solid desensitized explosives.
Packing Group: II
UN Number: UN1333
Proper Shipping Name: Cerium

Section 15: REGULATORY INFORMATION

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

Section 16: OTHER INFORMATION

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.