# YTTRIUM BARIUM COPPER OXIDE

### **SAFETY DATA SHEET**

DATE OF LAST REVISION: 07/06/15

### Section 1: Identification

Product Name: Yttrium Barium Copper Oxide

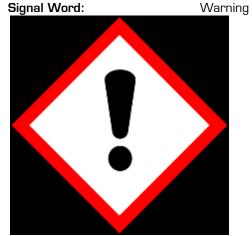
**Company:** Angstrom Sciences, Inc.

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



Hazard Statements: H302 + H332: Harmful if swallowed or if inhaled

**Precautionary Statements:** P261: Avoid breathing dust/fume/vapor

P264: Wash thoroughly after handling

P3O4 + P34O: If Inhaled: Remove victim to fresh air and keep at rest in a

position comfortable for breathing.

P301 + P312: If Swallowed: Call a Posison Center or doctor/physician if

you feel unwell

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 0

### Section 3: Composition/Information on Ingredients

Chemical characterization: Ceramic Additional Names: YBCO, YBCO123

Percentage: 100 wt%

**CAS# Description**: 107539-20-8

EC number: NIL

### 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 attention.

### Section 5: FIRE FIGHTING MEASURES

Flammability: Non-flammable

**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:** No special restrictions - Use suitable extinguishing agent for surrounding material and type of fire.

### 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.

**Environmental Precautions:** Isolate runoff to prevent environmental pollution.

#### Section 7: HANDLING AND STORAGE

Handling Precautions for safe handling: Wash thoroughly after handling.

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: 0.5 mg/m³ as Ba, long-term value

Threshold Limit Value: 0.5 mg/m³ as Ba, 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:

Powder Form: Color: Black Odor: Odorless Water Solubility: Insoluble **Boiling Point:** N/A **Melting Point:** N/A Flash Point: N/A Autoignition Temperature: N/A Density: N/A Molecular Weight: N/A

### Section 10: STABILITY AND REACTIVITY

Reactivity: Oxidizing agents

Chemical Stability: Stable under recommended storage conditions

Incompatible Conditions: None

Hazardous Decomposition Products: Metal oxide fume

# Section 11: TOXICOLOGICAL INFORMATION

Potential Health Effects: Eyes: Causes irritating effect

Skin: Irritating to skin and mucous membranes

**Ingestion:** May cause irritation **Inhalation:** May cause irritation

Chronic: Yttrium is similar to lanthanons and may have an anticoagulant effect on blood. Exposure may also lead to sensitivity to heat, itching, increased awareness of odor and taste, and liver damage. Barium compounds may cause severe gastroenteritis, including abdominal pain, vomiting

and diarrhea, tremors, faintness, paralysis of the arms and legs, and slow or irregular heartbeat. Sever cases may produce collapse and death due to respiratory failure. Soluble barium compounds are more likely to cause these effects than insoluble compounds. Inhalation of fumes may cause sore throat, coughing, labored breathing, and irritation of the respiratory tract as well as the above symptoms.

Copper compounds may be irritating to the skin, eyes and respiratory tract. They may cause metal fume fever, hemolysis of the red blood cells and injury to the liver, lungs, kidneys, and pancreas. Ingestion may also cause vomiting, gastric pain, dizziness, anemia, cramps, convulsions, shock, coma, and death.

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 as powder only



Hazard Class: 6.1 Toxic substances

Packing Group:

UN Number: UN1564

Proper Shipping Name: Barium compounds, n.o.s. (Yttrium barium copper oxide)

Section 15: REGULATORY INFORMATION

Sec 302 Extremely Hazardous: No

Sec 304 Reportable Quantities: N/A

Sec 313 Toxic Chemicals: Yes

### 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.