

COBALT OXIDE
SAFETY DATA SHEET

DATE OF LAST REVISION: 076/09/15

Section 1: Identification

Product Name: Cobalt Oxide
CAS Number: 1308-04-9 / **EC Number:** 215-154-6
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: Warning



Hazard Statements:

H302 Harmful if swallowed
P317: May cause an allergic skin reaction

Precautionary Statements:

P261: Avoid breathing dust/fume/vapor
P280: Wear protective gloves/protective clothing/eye protection/face protection
P301 + P312: IF SWALLOWED: Call a Poison Center or doctor/physician if you feel unwell.
P363: Wash contaminated clothing before reuse.
P321: Specific treatment (see on this label)
P501: Dispose of contents/container in accordance with local/regional/national/international regulations

COBALT OXIDE
SAFETY DATA SHEET

HMIS Health Ratings (0-4):

Health:	2
Flammability:	0
Physical	1

Section 3: Composition/Information on Ingredients

Chemical characterization: Ceramic

Additional Names: None

Percentage: 100 wt%

CAS# Description: 1308-04-9

EC number: 215-154-6

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: 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

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.

COBALT OXIDE
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, 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:	Black-Green
Odor:	Odorless
Water Solubility:	Insoluble
Boiling Point:	N/A
Melting Point:	1935°C
Flash Point:	N/A
Autoignition Temperature:	N/A
Density:	6.45 g/cc
Molecular Weight:	165.86 g/mol

Section 10: STABILITY AND REACTIVITY

Reactivity:	Oxidizing Agents
Chemical Stability:	Stable under recommended storage conditions
Incompatible Conditions:	Air
Hazardous Decomposition Products:	Metal oxide fume

Section 11: TOXICOLOGICAL INFORMATION

Potential Health Effects:

Eyes: Causes irritating effect

COBALT OXIDE
SAFETY DATA SHEET

Skin: Cause irritating effect.

Ingestion: May cause irritation

Inhalation: May cause irritation

Chronic: N/A

Signs & Symptoms:

N/A

Aggravated Medical Conditions:

N/A

Median Lethal Dose:

202 mg/kg for rat by mouth

Carcinogen:

IARC-2B: Possibly carcinogenic to humans: limited evidence in human in the absence of sufficient evidence in experimental animals.

ACGIH-A3: Animal carcinogen: Agent is carcinogenic in experimental animals at a relatively high dose, by routes of administration, at sites, of exposure. Available epidemiologic studies do not confirm an increased risk of cancer in exposed humans. Available evidence suggests that the agent is not likely to cause cancer in humans except under uncommon or unlikely routes or level of exposure.

Section 12: ECOLOGICAL INFORMATION

Aquatic Toxicity: High

Persistence Bioaccumulation Toxicity: No

Very Persistent, Very Bioaccumulative: No

Notes:

Very toxic for aquatic organism.

May cause long lasting harmful effect on aquatic life.

Do not allow material to be released to the environment without proper governmental permits.

Do not allow product to reach any water sources.

Danger to drinking water if even extremely small quantities leak into the ground.

Also poisonous for fish and plankton in water bodies.

Avoid transfer into the environment.

Section 13: DISPOSAL CONSIDERATIONS

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

Section 14: TRANSPORT INFORMATION

Hazardous: Hazardous as powder only.

COBALT OXIDE
SAFETY DATA SHEET



Hazard Class: 6.1 Toxic substances
Packing Group: III
UN Number: UN2811
Proper Shipping Name: Toxic solids, organic, n.o.s. (Cobalt 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.