

ZINC OXIDE ALUMINUM OXIDE
SAFETY DATA SHEET
DATE OF LAST REVISION: 07/14/15

Section 1: Identification

Product Name: Silicon Dioxide
CAS Number: Not available / **EC Number:** Not available
Company: Angstrom Sciences, Inc.
40 South Linden Street
Duquesne, PA 15110
For more information call: 412-469-8466
(Monday - Friday 9:00 AM -5:00 PM EST)

Section 2: HAZARD IDENTIFICATION

Signal Word: None

Hazard Statements: H401: Toxic to aquatic life



Precautionary Statements: None

HMIS Health Ratings (0-4):

Health:	1
Flammability:	0
Physical:	0

Section 3: Composition/Information on Ingredients

Chemical characterization: Ceramic

Additional Names: N/A

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Zinc Oxide (ZnO)

CAS# Description: 1314-13-2

Percentage: 0-99 wt%

EC number: 215-222-5

Aluminum Oxide (Al₂O₃)

CAS# Description: 1344-28-1

Percentage: 0-99 wt%

EC Number: 215-691-6

Section 4: FIRST AID MEASURES

General Treatment: Seek medical attention if symptoms persist.

Special Treatment: None

Eye Contact: Flush eyes with water, blinking often for ten minutes.

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

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

Ingestion: Give one to two glasses of water and induce vomiting. Never induce vomiting or give anything by mouth to an unconscious person.

Section 5: FIRE FIGHTING MEASURES

Flammability: Non-flammable

Flash Point: N/A

Autoignition Temperature: N/A

Extinguishing Media: Use suitable extinguishing agent for surrounding material and type of fire.

Special Fire Fighting Procedure: Use full-face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes.

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: A hazard to drinking water when entering the ground is not to be suspected.

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Section 7: HANDLING AND STORAGE

Handling Precautions for safe handling: Wash thoroughly after handling.

Storage Conditions: Store in a cool dry place in a tightly sealed container.

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.

Section 8: EXPOSURE CONTROL/PERSONAL PROTECTION

Permissible Exposure Limits: 5 mg/m³ as ZnO respirable fraction (USA)

Threshold Limit Value: 1 mg/m³ as Al, long-term respirable fraction (USA)

Respiratory Protection: Dust respirator, NIOSH approved

Protective Gloves: Rubber gloves

Eye Protection: Safety Glasses / 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: White

Odor: Odorless

Water Solubility: Insoluble

Boiling Point: N/A

Melting Point: N/A

Density: N/A

Section 10: STABILITY AND REACTIVITY

Reactivity: Stable under recommended storage conditions.

Reacts With: Strong oxidizing agents, halogenated products.

Incompatible Conditions: None

Hazardous Decomposition Products: Metal Oxide Fume

Section 11: TOXICOLOGICAL INFORMATION

Potential Health Effects:

Eyes: May cause irritation

Skin: May cause irritation

Ingestion: Low toxicity

Inhalation: May cause irritation

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Details: Zinc compounds have variable low toxicity. Zinc is not inherently a toxic element. However, when heated it evolves a fume of zinc oxide which, when inhaled fresh can cause a disease known as "brass founders" "ague" or "brass chills". Zinc dust which is not freshly formed is virtually innocuous. There is no cumulative effect from the inhalation of zinc fumes.

Route of entry:	None
Signs & Symptoms:	N/A
Aggravated Medical Conditions:	N/A
Median Lethal Dose:	N/A
Carcinogen:	Inadequate information

Section 12: ECOLOGICAL INFORMATION

Ecological effects: Danger to drinking water, even in small doses. Poisonous to fish and aquatic life.

Section 13: DISPOSAL CONSIDERATIONS

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

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

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.