

**CADMIUM SELENIDE  
SAFETY DATA SHEET**

DATE OF LAST REVISION: 011/07/14

**Section 1: Identification**

**Product Name:** Cadmium Selenide  
**CAS Number:** 1306-24-7 / **EC Number:** 215-148-3  
**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:**

H301 + H331: Toxic if swallowed or inhaled  
H312: Harmful in contact with skin.  
H373: May cause damage to organs through repeated or prolonged exposure.  
H410: Very toxic to aquatic organisms with long-lasting effects.

**Precautionary Statements:**

P261: Avoid breathing dust/fume/vapor  
P273: Avoid releasing to the environment  
P301 + P310 If swallowed: Immediately call a poison center/doctor.  
P501: Dispose of contents and container in accordance with applicable regulations.

**HMIS Health Ratings (0-4):**

Health: 2  
Flammability: 0  
Physical: 1

**CADMIUM SELENIDE  
SAFETY DATA SHEET**

**Section 3: Composition/Information on Ingredients**

**Chemical characterization:** Ceramic

**Additional Names:** N/A

**Percentage:** 100 wt%

**CAS# Description:** 1306-24-7

**EC number:** 215-148-3

**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:** Immediately contact poison center or doctor. Do not induce vomiting.

**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:** 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.

**CADMIUM SELENIDE**  
**SAFETY DATA SHEET**

**Section 8: EXPOSURE CONTROL/PERSONAL PROTECTION**

**Permissible Exposure Limits:** 0.2 mg/m<sup>3</sup> as Se, long-term value  
**Threshold Limit Value:** 0.2 mg/m<sup>3</sup> as Se, 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:** Red, brown, black  
**Odor:** Odorless  
**Water Solubility:** Insoluble  
**Boiling Point:** N/A  
**Melting Point:** 1268°C  
**Density:** 5.82 g/cc  
**Molecular Weight:** 191.36 g/mol

**Section 10: STABILITY AND REACTIVITY**

**Reactivity:** Oxidizing Agents, Acids  
**Chemical Stability:** Stable under recommended storage conditions  
**Incompatible Conditions:** None  
**Hazardous Decomposition Products:** Metal Oxide Fume, Hydrogen Selenide

**Section 11: TOXICOLOGICAL INFORMATION**

**Potential Health Effects:**

**Eyes:** May cause irritation.

**Skin:** May cause irritation

**Ingestion:** May cause irritation

**Inhalation:** May be Fatal

**Chronic:** May cause damage to the central nervous system, the kidneys, the liver, the reproductive system, the digestive system and the blood tissue through prolonged or repeated exposure. Route of exposure: oral, Inhalative.

**Signs & Symptoms:** N/A  
**Aggravated Medical Conditions:** N/A  
**Median Lethal Dose:** >5000 mg/kg for rat by mouth

**CADMIUM SELENIDE**  
**SAFETY DATA SHEET**

**Carcinogen:**

IARC-1: carcinogenic to humans: sufficient evidence of carcinogenicity.

EPA-B1: Probable human carcinogen, limited evidence of carcinogenicity from epidemiologic studies.

ACGIH A2: Suspected human carcinogen: Agent is carcinogenic in experimental animals at dose levels, by routes of administration, at sites, of histologic types, or by mechanisms considered relevant to worker exposure. Available epidemiologic studies are conflicting or insufficient to confirm an increased risk of cancer in exposed humans.

NTP-K: Known to be carcinogenic; sufficient evidence from human studies.

**Section 12: ECOLOGICAL INFORMATION**

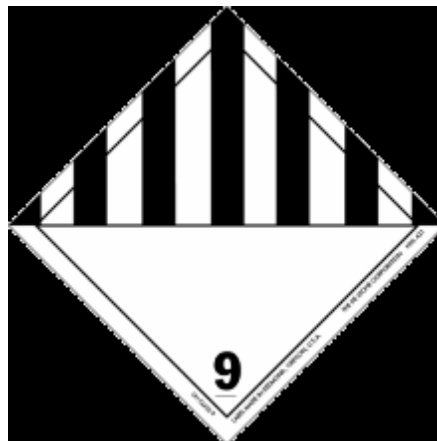
**Comments:** Very toxic for aquatic organism. May cause long lasting harmful effect on aquatic life. Do not allow material to be released to the environment without proper governmental permits. Do not allow products to reach any water sources. Danger to drinking water if even extremely small quantities leak into the ground.

**Section 13: DISPOSAL CONSIDERATIONS**

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

**Section 14: TRANSPORT INFORMATION**

**Hazardous:** Hazardous for transportation



**Hazard Class:**

9 Miscellaneous dangerous substances and articles

**Packing Group:**

III

**UN Number:**

UN3077

**CADMIUM SELENIDE  
SAFETY DATA SHEET**

**Proper Shipping Name:** Environmentally hazardous substance, solid, n.o.s. (Cadmium selenide)

**Section 15: REGULATORY INFORMATION**

<b>Sec 302 Extremely Hazardous:</b>	No
<b>Sec 304 Reportable Quantities:</b>	N/A
<b>Sec 313 Toxic Chemicals:</b>	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.