

## Material Safety Data Sheet

Identity: Cadmium Sulfide

Formula: CdS

### Section I - General Information

Manufacturer: [Stanford Advanced Materials](#) (SAM)

The information below is believed to be accurate and represents the best information available to SAM. However, SAM makes no warranty, expressed or implied with respect to such information and we assume no liability resulting from its use.

### Section II - Hazardous Ingredients/Identity Information

*Chemical Family:* Metallic sulphide*Molecular weight:* 144.46

Hazardous Components	CAS #	OSHA PEL	ACGIH TLV	%
Cadmium Sulfide	1306-23-6	0.2mg/m <sup>3</sup> (Cd)	40mg/m <sup>3</sup>	100

### Section III - Physical/Chemical Characteristics

Boiling Point: Sublimes in N<sub>2</sub> @ 980

Specific Gravity (water=1): 4.82 gm/cc

Melting Point: 1750 @ 100 atm

Solubility in water: insoluble

Physical States: Solid

Evaporation Rate: 0

Soluble in acid, very slightly soluble in NH<sub>4</sub>OH*Appearance and odor:* Yellow-orange crystalline powder. Odorless.

### Section IV - Fire and Explosion Hazard Data:

*Flash Point:* NA*Extinguishing Media:* Use dry chemical, CO<sub>2</sub> – DO NOT USE WATER!

When heated to decomposition, it emits very toxic fumes of Cd and SO<sub>x</sub>. Many sulfides react violently with powerful oxidizers to cause explosion and fire hazards. Moderate fire hazard when exposed to flame or by spontaneous chemical reaction. Many sulphides ignite easily in air at room temperature. Others require a higher temperature or the presence of an oxidizer.

### Section V - Reactivity Data

*Stability:* Stable*Conditions to Avoid:* Heat, flame and incompatible materials.*Incompatibility - Materials to Avoid:* Strong acids, strong bases and oxidizers.*Hazardous Decomposition Products:* Cd, CdO, S, SO<sub>x</sub>*Hazardous Polymerization:* Will not occur.

### Section VI - Health Hazard Data

*Routes of Entry:* Ingestion, inhalation, eye, and skin contact.

*Inhalation:* Remove victim to fresh air, keep warm and quiet, and give oxygen if breathing is difficult; seek medical attention

*Ingestion:* Give 1-2 glasses of milk or water and induce vomiting, seek medical attention. Never induce vomiting or give anything by mouth to an unconscious person

*Skin:* Remove contaminated clothing, brush material off skin, wash affected area with mild soap and water, and seek medical attention if symptoms persist

*Eye:* Flush eyes with lukewarm water, lifting upper and lower eyelids for at least 15 minutes and seek medical attention

#### SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

*Steps to be taken in case material is released or spilled:*

Wear appropriate respiratory and protective equipment specified in section VIII. Isolate spill area, provide ventilation and extinguish sources of ignition. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for proper disposal. Take care not to raise dust.

*Waste disposal method:* Dispose of in accordance with state, local, and federal regulations.

*Hazard Label Information:*

Store in cool, dry area and in tightly sealed container. Wash thoroughly after handling.

#### SECTION VIII - CONTROL MEASURES

*Protective Equipment Summary (Hazard Label Information):*

NIOSH approved respirator, impervious gloves, safety glasses, clothes to prevent contact.

*Ventilation:*

Local Exhaust: To maintain concentration at low exposure levels.

Mechanical (General): Recommended.

*Work/Hygienic/Maintenance Practices:*

Implement engineering and work practice controls to reduce and maintain concentration of exposure at low levels. Use good housekeeping and sanitation practices. Do not use tobacco or food in work area. Wash thoroughly before eating or smoking. Do not blow dust off clothing or skin with compressed air.

Please be advised that N/A can either mean Not Applicable or No Data Has Been