



**MATERIAL SAFETY DATA SHEET**  
COMPLIES WITH 29 CFR 1910.1200.  
OSHA HAZARD COMMUNICATION RULE

**DATE OF LAST REVISION: 04-05-07**

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## CHEMICAL IDENTITY

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LABEL IDENTITY	<b>CADMIUM SULFIDE</b>
CHEMICAL NAME/SYNONYMS	<b>CADMIUM SULFIDE</b>
FORMULA	<b>CdS</b>
CHEMICAL FAMILY	<b>CADMIUM COMPOUNDS</b>
CAS REGISTRY NUMBER	<b>1306-23-61, LISTED IN THE TSCA INVENTORY</b>
HAZARDOUS INGREDIENTS	<b>CADMIUM SULFIDE</b>
%: <b>ND</b>	<b>TLV: 0.05mg/m3      OSHA/PEL: 0.1mg/M3</b>

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## PHYSICAL AND CHEMICAL PROPERTIES

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COLOR, FORM AND ODOR	<b>Yellow to orange powder or crystals</b>
ODOR	<b>Powder may have sulfur odor</b>
BOILING POINT	<b>Sublimes in inert atmosphere 760 @ 980C</b>
DENSITY (gm/cc)	<b>NA</b>
VAPOR PRESSURE @ 20°	<b>NA</b>
% VOLATILE BY VOLUME (%)	<b>NA</b>
REACTION WITH WATER	<b>NA</b>
EVAPORATION RATE (H2O=1)	<b>NA</b>
SOLUBILITY IN WATER	<b>0.13mg/100 gm H2O at 18°C</b>
MELTING POINT	<b>1750°C in inert atmosphere @ 100 atmosphere pressure</b>

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## FIRE AND EXPLOSION HAZARD DATA

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FLASH POINT	<b>NA</b>
AUTOIGNITION TEMPERATURE (° C)	<b>NA</b>
FLAMMABILITY	<b>NA</b>
EXTINGUISHING MEDIA	<b>Use appropriate extinguishing media for adjacent burning material</b>
SPECIAL FIRE FIGHTING PROCEDURES	<b>Wear a self-contained breathing apparatus</b>
UNUSUAL FIRE & EXPLOSION HAZARDS	<b>Emits toxic vapors and fumes of Cd and SOx on thermal decomposition</b>



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### HEALTH HAZARD INFORMATION

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#### TOXICITY DATA

**Highly toxic to respiratory tract; possible pulmonary edema and death if exposure is great. Kidney can be affected. Possible gastro-intestinal poisoning with symptoms resembling food poisoning.**

#### HMIS RATING:

HEALTH: **ND** FLAMMABILITY: **ND** REACTIVITY: **ND** PERSONAL PROTECTION: **ND**

#### ROUTES OF ENTRY

INHALATION: **Yes**  
SKIN: **Yes**  
INGESTION: **Yes**

#### MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

**Respiratory Ailments**

#### EFFECTS OF OVEREXPOSURE (acute and chronic):

INHALATION: **dryness of throat, dyspepsia, coughing, headache and vomiting.**  
INGESTION: **sudden nausea, salivation, vomiting, diarrhea, abdominal pain and discomfort. Possible aggravation to those suffering respiratory ailments.**

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CARCINOGENICITY: **NP (listed as not possible)**

NTP: **Yes**

IARC MONOGRAPHS: **Monographs-listed**

OSHA REGULATE: **regulated-No**

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#### EMERGENCY FIRST AID PROCEDURES:

INGESTION: **if conscious, induce vomiting. Seek medical attention.**  
INHALATION: **Remove to fresh air, give artificial respiration if not breathing.**  
SKIN CONTACT: **Wash affected area with soap and water.**  
EYE CONTACT: **Flush with water copiously**

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### REACTIVITY DATA

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#### STABILITY

**Stable**

#### CONDITIONS CONTRIBUTING TO UNSTABILITY

**Heat and acids**

#### INCOMPATIBILITY (MATERIALS TO AVOID)

**Soluble in concentrated or warm, dilute**

#### HAZARDOUS DECOMPOSITION PRODUCTS

**HNO<sub>3</sub> with liberation of NO<sub>2</sub>**

#### HAZARDOUS POLYMERIZATION

**Cadmium oxide and Hydrogen sulfide**

#### CONDITIONS TO AVOID

**Will Not Occur**

**NA**



## CADMIUM SULFIDE MATERIAL SAFETY DATA SHEET

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### SAFE HANDLING AND USE

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STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

**Clean up spill carefully, minimizing dusting. Place in closed container for proper disposal.**

WASTE DISPOSAL METHOD:

**Consult federal, state and local regulations for proper disposal.**

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### SPECIAL PROTECTIVE INFORMATION

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RESPIRATORY PROTECTION	<b>Dust mask</b>
LOCAL EXHAUST	<b>Meet TLV requirements</b>
MECHANICAL (general)	<b>Meet TLV requirements</b>
SPECIAL	<b>Fume hood for powder</b>
OTHER	<b>Lab coat or overalls</b>
PROTECTIVE GLOVES	<b>Rubber or vinyl</b>
EYE PROTECTION	<b>Safety glasses with shields</b>
OTHER PROTECTIVE EQUIPMENT	<b>No eating or smoking when handling this material. Wash after use.</b>

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### SPECIAL PRECAUTIONS

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PRECAUTIONS TO BE TAKEN IN HANDLING/STORAGE:

**Store away from heat and acids.**

TRANSPORTATION REQUIREMENTS

DOT CLASS: **6.1 Poison B**

UN NUMBER: **UN 2570**

IMCO CLASS:

OTHER:

PRECAUTIONARY LABELING

**NONE**

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THE ABOVE INFORMATION IS ACCURATE TO THE BEST OF OUR KNOWLEDGE. HOWEVER, SINCE DATA, SAFETY STANDARDS AND GOVERNMENT REGULATIONS ARE SUBJECT TO CHANGE THE CONDITIONS OF HANDLING AND USE, OR MISUSE ARE BEYOND OUR CONTROL, **ANGSTROM SCIENCES** MAKE NO WARRANTY, EITHER EXPRESSED OR IMPLIED, WITH RESPECT TO THE COMPLETENESS OR CONTINUING ACCURACY OF THE INFORMATION CONTAINED HEREIN AND DISCLAIMS ALL LIABILITY FOR THE RELIANCE THEREON. USER SHOULD SATISFY HIMSELF THAT HE HAS ALL CURRENT DATA RELEVANT TO HIS PARTICULAR USE.

NA= NOT APPLICABLE

ND= NO DATA FOUND