



XI'AN FUNCTION MATERIAL GROUP CO., LTD  
Material Safety Data Sheet  
Cadmium Sulfide

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1. Product and Company Identification

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Trade Name:	Cadmium sulfide
Chemical Formula:	CdS
Manufacturer/Supplier:	XI'AN FUNCTION MATERIAL GROUP CO., LTD
Street:	No. 69, Gazelle Valley, High-Tech Zone
City:	XI'AN
State:	Shaanxi
Zip Code:	710077
Country:	China
Tel #:	+86-29-88993870/+86-13519132051

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2. Hazards Identification

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Signal Word: Danger



Hazard Statements:

- H302 Harmful if swallowed
- H341 Suspected of causing genetic defects
- H350 May cause cancer
- H361 Suspected of damaging fertility or the unborn child
- H372 Causes damage to the lung, the kidneys, the reproductive system and the blood through prolonged or repeated exposure. Route of exposure: Oral.

Precautionary Statements:

- P260: Do not breathe dust/fume/gas/mist/vapours/spray
- P281: Use personal protective equipment as required
- P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
- P308+P313: IF exposed or concerned: Get medical advice/attention
- P405: Store locked up
- P501: Dispose of contents/container in accordance with local/regional/national/international regulations

HMIS Health Ratings (0-4):

Health:	2
Flammability:	0
Physical:	1

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### 3. Composition

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Chemical Family: Ceramic  
Additional Names: Cadmium(II) sulfide

Cadmium sulfide (CdS):  
Percentage: 100 wt%  
CAS #: 1306-23-6  
EC #: 215-147-8

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### 4. First Aid Procedures

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General Treatment: Seek medical attention if symptoms persist.  
Special Treatment: None  
Important Symptoms: None

Inhalation: Remove victim to fresh air. Supply oxygen if breathing is difficult.  
Ingestion: Seek medical attention  
Skin: Wash affected area with mild soap and water. Remove any contaminated clothing.  
Eyes: Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing

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### 5. Firefighting Measures

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Flammability: Non-flammable  
Extinguishing Media: No special restrictions – use suitable extinguishing agent for surrounding material and type of fire.  
Spec. 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.

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### 6. Accidental Release Measures

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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: Isolate runoff to prevent environmental pollution.

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### 7. Handling and Storage

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Handling Conditions: Wash thoroughly after handling.  
Storage Conditions: 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.

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## 8. Exposure Controls and Personal Protection

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Permissible Exposure Limits: 0.005 mg/m<sup>3</sup> as Cd, long-term value  
Threshold Limit Value: 0.01 mg/m<sup>3</sup> as Cd, long-term value  
0.002 mg/m<sup>3</sup> as Cd, respirable fraction, long-term value

Special Equipment: None  
Respiratory Protection: Use a respirator with type P100 (USA) or P3 (EN143) cartridges as a backup to engineering controls. Risk assessment should be performed to determine if air-purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards.  
Protective Gloves: Rubber gloves  
Eye Protection: Safety glasses or goggles  
Body Protection: Protective work clothing. Wear close-toed shoes and long sleeves/pants.

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## 9. Physical and Chemical Characteristics

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Color: Orange  
Form: Powder, Granules, Pellets, Sputtering target, Custom parts  
Odor: Odorless  
Water Solubility: Insoluble  
Boiling Point: N/A  
Melting Point: 980 °C  
Flash Point: N/A  
Autoignition Temperature: N/A  
Density: 4.82 g/cc  
Molecular weight: 144.464 g/mol

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## 10. Reactivity

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Stability: Stable under recommended storage conditions  
Reacts With: Acids, Oxidizing agents  
Incompatible Conditions: None  
Hazardous Decomposition Products: Sulfur oxides, Hydrogen sulfide, Cadmium oxide

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## 11. Toxicological Information

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### Potential Health Effects:

Eyes: May cause irritation  
Skin: May cause irritation  
Ingestion: Harmful  
Inhalation: May cause irritation  
Chronic: Causes damage to the lung, the kidneys

Germ cell mutagenicity: Suspected of causing genetic defects

Signs & Symptoms: N/A  
Aggravated Medical Conditions: N/A

Median Lethal Dose: 1166 mg/kg for mouse by mouth  
7080 mg/kg for rat by mouth

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.

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## 12. Ecological Information

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Aquatic Toxicity:	High
Persistent Bioaccumulation Toxicity:	No
Very Persistent, Very Bioaccumulative:	No
Notes:	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.

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## 13. Disposal Considerations

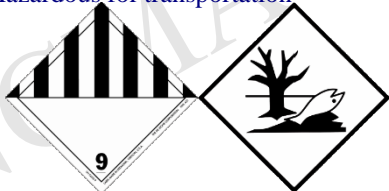
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Dispose of in accordance with local, state, national, and international regulations.

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## 14. Transportation Data

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Hazardous:	Hazardous for transportation 
Hazard Class:	9 miscellaneous dangerous substances and articles
Packing Group:	III
UN Number:	UN3077
Proper Shipping Name:	Environmentally hazardous substances, solid, n.o.s. (Cadmium sulfide)

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## 15. Regulatory Information

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Sec 302 Extremely Hazardous:	No
Sec 304 Reportable Quantities:	N/A
Sec 313 Toxic Chemicals:	Yes

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## 16. Other Information

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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.

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