



XI'AN FUNCTION MATERIAL GROUP CO., LTD  
Material Safety Data Sheet  
Zinc Sulfide Magnesium Fluoride

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1. Product and Company Identification

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Trade Name: Zinc sulfide - magnesium fluoride  
Chemical Formula: ZnS-MgF<sub>2</sub>

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: Warning



Hazard Statements: H315 Causes skin irritation  
H319 Causes serious eye irritation  
H335 May cause respiratory irritation  
H303 May be harmful if swallowed

Precautionary Statements: P261 Avoid breathing dust/fume/vapor  
P305+P351+P338 If in eyes: rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P302+P352 If on skin: wash with plenty of water

HMIS Health Ratings (0-4):

Health: 1  
Flammability: 0  
Physical: 1

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3. Composition

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Chemical Family: Salt  
Additional Names: None

Zinc Sulfide (ZnS):  
Percentage: 0-99 wt%  
CAS #: 1314-98-3  
EC #: 215-251-3  
Magnesium Fluoride (MgF<sub>2</sub>):  
Percentage: 0-99 wt%  
CAS #: 7783-40-6  
EC #: 231-995-1

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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:          | Give one to two glasses of water and induce vomiting. Never induce vomiting or give anything by mouth to an unconscious person. |
| 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: | 2.5 mg/m <sup>3</sup> as F  |
| Threshold Limit Value:       | 2.5 mg/m <sup>3</sup> as F  |
| 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. |

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## 9. Physical and Chemical Characteristics

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|                           |  |
|---------------------------|--|
| Color                     | White to off-white   |
| Form:                     | Powder, Granules, Pellets, Sputtering target, Custom parts |
| Odor:                     | Odorless   |
| Water Solubility:         | Low  |
| Boiling Point:            | N/A  |
| Melting Point:            | N/A  |
| Flash Point:              | N/A  |
| Autoignition Temperature: | N/A  |
| Density:                  | 3-4 g/cc   |
| Molecular weight:         | N/A  |

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## 10. Reactivity

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|                                   |   |
|-----------------------------------|---|
| Stability:                        | Stable under recommended storage conditions |
| Reacts With:                      | Oxidizing agents, acids                     |
| Incompatible Conditions:          | None  |
| Hazardous Decomposition Products: | Metal oxide fume, Hydrogen fluoride         |

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## 11. Toxicological Information

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|                                |  |
|--------------------------------|--|
| Potential Health Effects:      |  |
| Eyes:                          | May cause irritation   |
| Skin:                          | Causes serious irritation  |
| Ingestion:                     | Contact with acids liberates toxic gas   |
| Inhalation:                    | May cause irritation   |
| Chronic:                       | Zinc-containing fumes may cause metal fume fever. Sulfides may cause irritation to skin, corrosive by ingestion. Hydrogen sulfide, if generated, is toxic, a severe irritant and flammable. Effects include conjunctivitis, headache, nausea, dizziness, coughing, pulmonary edema and leading to death. |
| Signs & Symptoms:              | N/A  |
| Aggravated Medical Conditions: | N/A  |
| Median Lethal Dose:            | >2000 mg/kg for rat by mouth   |
| Carcinogen:                    | EPA-I: Data are inadequate for an assessment of human carcinogenic potential.<br>EPA-II: Inadequate information to assess carcinogenic potential.<br>EPA-D: Not classifiable as to human carcinogenicity: inadequate   |

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## 12. Ecological Information

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|--|-----|
| Aquatic Toxicity:                      | Low |
| Persistent Bioaccumulation Toxicity:   | No  |
| Very Persistent, Very Bioaccumulative: | No  |
| Notes:                                 | N/A |

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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:            | Not hazardous for transportation. |
| Hazard Class:         | N/A                               |
| Packing Group:        | N/A                               |
| UN Number:            | N/A                               |
| Proper Shipping Name: | N/A                               |

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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 (Zinc Sulfide) |

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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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