



XI'AN FUNCTION MATERIAL GROUP CO., LTD  
Material Safety Data Sheet  
Indium Antimonide

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1. Product and Company Identification

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|------------------------|----------------------------------------|
| Trade Name:            | Indium antimonide                      |
| Chemical Formula:      | InSb                                   |
| 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: H302+H332: Harmful if swallowed or if inhaled

Precautionary Statements: P261 Avoid breathing dust/fume/vapor  
P264: Wash thoroughly after handling  
P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell  
P312: Call a POISON CENTER or doctor/physician if you feel unwell  
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:         | Indium monoantimonide |
| Indium antimonide (InSb): |                       |
| Percentage:               | 100 wt%               |
| CAS #:                    | 1312-41-0             |
| EC #:                     | 215-192-3             |

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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:           | Do not use water for metal fires – use CO <sub>2</sub> , sand, extinguishing powder.                                                                              |
| 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: | 0.1 mg/m <sup>3</sup> as Sb, long-term value                            |
| Threshold Limit Value:       | 0.1 mg/m <sup>3</sup> as InSb, 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. |

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## 9. Physical and Chemical Characteristics

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|                           |                                                    |
|---------------------------|----------------------------------------------------|
| Color                     | Silver grey                                        |
| Form:                     | Granules, Pellets, Sputtering target, Custom parts |
| Odor:                     | Odorless                                           |
| Water Solubility:         | Insoluble                                          |
| Boiling Point:            | N/A                                                |
| Melting Point:            | 500 °C                                             |
| Flash Point:              | N/A                                                |
| Autoignition Temperature: | N/A                                                |
| Density:                  | 5.75 g/cc                                          |
| Molecular weight:         | 236.58 g/mol                                       |

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## 10. Reactivity

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

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## 11. Toxicological Information

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|                                |                                                                                                                                                                                                                                                                                                                                                                                                             |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Potential Health Effects:      |                                                                                                                                                                                                                                                                                                                                                                                                             |
| Eyes:                          | Causes irritation                                                                                                                                                                                                                                                                                                                                                                                           |
| Skin:                          | Causes irritation                                                                                                                                                                                                                                                                                                                                                                                           |
| Ingestion:                     | Harmful                                                                                                                                                                                                                                                                                                                                                                                                     |
| Inhalation:                    | Harmful                                                                                                                                                                                                                                                                                                                                                                                                     |
| Chronic:                       | Exposure to indium compounds may cause pain in the joints and bones, tooth decay, nervous and gastrointestinal disorders, heart pain and general debility. Experiments with animals also indicate that indium may cause reduced food and water consumption with weight loss, pulmonary edema, pneumonia, blood, liver and kidney damage, leg paralysis and damage to the brain, heart, adrenals and spleen. |
| Signs & Symptoms:              | N/A                                                                                                                                                                                                                                                                                                                                                                                                         |
| Aggravated Medical Conditions: | N/A                                                                                                                                                                                                                                                                                                                                                                                                         |
| Median Lethal Dose:            | N/A                                                                                                                                                                                                                                                                                                                                                                                                         |
| Carcinogen:                    | N/A                                                                                                                                                                                                                                                                                                                                                                                                         |

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## 12. Ecological Information

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|                                        |                             |
|----------------------------------------|-----------------------------|
| Aquatic Toxicity:                      | Low                         |
| Persistent Bioaccumulation Toxicity:   | No                          |
| Very Persistent, Very Bioaccumulative: | No                          |
| Notes:                                 | 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 product to reach any water sources.  
Danger to drinking water if even extremely small quantities leak into the ground.  
Also poisonous for fish and plankton in water bodies.  
Do not allow undiluted product or large quantities to reach ground water, water course or sewage system.  
Avoid transfer into the environment.

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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: 6.1 Toxic substances  
Packing Group: III  
UN Number: UN1549  
Proper Shipping Name: Antimony compounds, inorganic, solid, n.o.s. (indium antimonide)

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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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