



XI'AN FUNCTION MATERIAL GROUP CO., LTD
Material Safety Data Sheet
Copper Gallium Alloy

1. Product and Company Identification

Trade Name: Copper gallium alloy
Chemical Formula: Cu-Ga
Recommended Use: Scientific research and development

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

2. Hazards Identification

Signal Word:

Danger



Hazard Statements:

H228 Flammable powder
H319 Causes serious eye irritation
H333 May be harmful if inhaled

Precautionary Statements:

P210 Keep away from heat, sparks. No smoking.
P261 Avoid breathing dust/fume
P305+351+338: If in eyes: rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing

HMIS Health Ratings (0-4):

Health: 1
Flammability: 2
Reactivity: 1

3. Composition

Chemical Family: Metal alloy
Additional Names: N/A

Copper (Cu):
Percentage: 0-100 wt%
CAS #: 7440-50-8
EC #: 231-159-6

Gallium (Ga):
Percentage: 0-100 wt%
CAS #: 7440-55-3
EC #: 231-163-8

4. First Aid Procedures

| | |
|---------------------|---|
| 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 ten minutes. |

5. Fire and Explosion Hazards Data

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|--------------------------------|--|
| Flammability: | Non-flammable, except as powder |
| Flash Point: | N/A |
| Autoignition Temperature: | N/A |
| Extinguishing Media: | Do not use water for metal fires. Use dry extinguishing agent, sand, CO ₂ . |
| Spec. Fire Fighting Procedure: | Use full-face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. |

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. |

7. Handling and Storage

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| Handling Conditions: | Wash thoroughly after handling. |
| Storage Conditions: | Store refrigerated in a dry place in a tightly sealed container. |
| 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 TLV. |

8. Exposure Controls and Personal Protection

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| Permissible Exposure Limits: | 1 mg/m ³ as Cu dust, long-term 0.1 mg/m ³ as Cu fume, long-term |
| Threshold Limit Value: | 1 mg/m ³ as Cu dust, long-term 0.2 mg/m ³ as Cu fume, long-term |
| Special Equipment: | None |
| Respiratory Protection: | Dust Respirator, NIOSH approved |
| Protective Gloves: | Rubber gloves |
| Eye Protection: | Safety glasses / goggles |
| Body Protection: | Protective work clothing. Wear close-toed shoes and long sleeves/pants. |

9. Physical and Chemical Characteristics

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|-------------------|--|
| Color | Metallic grey or brown |
| Form: | Powder, Granules, Pellets, Sputtering target, Custom parts |
| Odor: | Odorless |
| Water Solubility: | Insoluble |
| Boiling Point: | N/A |
| Melting Point: | Low, 29.8 °C for pure gallium |
| Density: | N/A |
| Molecular weight: | N/A |

10. Reactivity

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|------------------------------|--|
| Stability: | Stable under recommended storage conditions |
| Reacts With: | Oxidizing agents, Acids, Halogens, Aluminum and Magnesium alloys |
| Incompatible Conditions: | Warmth |
| Haz. Decomposition Products: | Metal oxide fume |

11. Toxicological Information

| | |
|---------------------------|---------------------------|
| Potential Health Effects: | |
| Eyes: | Causes serious irritation |
| Skin: | May cause irritation |
| Ingestion: | May cause irritation |
| Inhalation: | May cause irritation |

| | |
|-------------------------------|-----|
| Routes of Entry: | N/A |
| Target Organs: | N/A |
| Signs & Symptoms of Exposure: | N/A |
| Medical Conditions | |
| Aggravated by Exposure: | N/A |
| Median Lethal Dose: | N/A |
| Carcinogen: | N/A |

12. Ecological Information

Ecological data is not available.

13. Disposal Considerations

Dispose of in accordance with local, state and federal regulations.

14. Transportation Data

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|------------------|---------------------------|
| Maritime (IMDG): | Marine pollutant |
| Hazardous: | Hazardous as powder only. |



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|-----------------------|----------------------------------|
| Hazard Class: | 4.1 Flammable solids |
| Packing Group: | III |
| UN Number: | UN3089 |
| Proper Shipping Name: | Metal powders, flammable, n.o.s. |

15. Regulatory Information

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

16. Other Information

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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