



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

1. Product and Company Identification

Trade Name: Iron Gallium Alloy
Chemical Formula: FeGa
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:

Warning



Hazard Statements:

H228: Flammable solid
H290: May be corrosive to metals
H319 Causes serious eye irritation
H335: May cause respiratory irritation

Precautionary Statements:

P234: Keep only in original container
P261 Avoid breathing dust/fume/vapor
P210: Keep away from heat/sparks/open flames/hot surfaces – No smoking
P280: Wear protective gloves/protective clothing/eye protection/face protection
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing
P390: Absorb spillage to prevent material damage
P405: Store locked up
P406: Store in a corrosive resistant container with a resistant inner liner
P501: Dispose of contents/container in accordance with local/regional/national/international regulations

HMIS Health Ratings (0-4):

	Powder	Bulk
Health:	1	1
Flammability:	2	0
Physical:	1	1

3. Composition

Chemical Family: Alloy
Additional Names: Gallium Iron Alloy

Iron (Fe):
Percentage: 0-100 wt%
CAS #: 7439-89-6
EC #: 231-096-4

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: 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

5. Firefighting Measures

Flammability: Flammable as powder
Extinguishing Media: Do not use water for metal fires – use CO₂, 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.

6. Accidental Release Measures

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

Handling Conditions: Wash thoroughly after handling.
Storage Conditions: Gallium melts at slightly elevated temperatures. 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.

8. Exposure Controls and Personal Protection

Permissible Exposure Limits:	N/A
Threshold Limit Value:	5 mg/m ³ as Fe, long-term value
Special Equipment:	None
Respiratory Protection:	Use suitable Respirator when high concentrations are present. Recommended Respirators are type N95 (USA) or PE (EN 143).
Protective Gloves:	Nitrile Rubber. NBR
Eye Protection:	Safety glasses or goggles
Body Protection:	Protective work clothing. Wear close-toed shoes and long sleeves/pants.

9. Physical and Chemical Characteristics

Color	N/A
Form:	Powder, Granules, Pellets, Sputtering target, Custom parts
Odor:	N/A
Water Solubility:	Insoluble
Boiling Point:	N/A
Melting Point:	N/A
Flash Point:	N/A
Autoignition Temperature:	N/A
Density:	N/A
Molecular weight:	N/A

10. Reactivity

Stability:	Stable under recommended storage conditions
Reacts With:	Acids, Halogens, Aluminum/aluminum alloys, Magnesium/magnesium alloys, Oxidizing agents, Metals, Bases, Heat
Incompatible Conditions:	Heat
Hazardous Decomposition Products:	Metal oxide fume, Iron oxides, Gallium Oxide

11. Toxicological Information

Potential Health Effects:	
Eyes:	Causes serious eye damage
Skin:	May cause irritation
Ingestion:	May cause irritation
Inhalation:	May cause irritation
Chronic:	The Registry of Toxic Effects of Chemical Substances (RTECS) contains multiple dose toxicity data for this substance.
Signs & Symptoms:	N/A
Aggravated Medical Conditions:	N/A
Median Lethal Dose:	30000 mg/kg for rat by mouth
Carcinogen:	The Registry of Toxic Effects of Chemical Substances (RTECS) contains tumorigenic and/or carcinogenic and/or neoplastic data for this substance. No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

12. Ecological Information

Aquatic Toxicity:	N/A
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Persistent Bioaccumulation Toxicity: N/A
Very Persistent, Very Bioaccumulative: N/A
Notes: Do not allow material to be released to the environment without proper governmental permits.
Avoid Transfer to the environment.

13. Disposal Considerations

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

14. Transportation Data

Hazardous: Hazardous as powder.



Hazard Class: 4.1 Flammable solids, self-reactive substances and solid desensitized explosives

Packing Group: III

UN Number: UN3089

Proper Shipping Name: Metal powders, flammable, n.o.s. (Iron Gallium Alloy)

Hazardous: Hazardous as Bulk.



Hazard Class: 8 Corrosive substances.

Packing Group: III

UN Number: UN2803

Proper Shipping Name: Gallium

15. Regulatory Information

Sec 302 Extremely Hazardous: No

Sec 304 Reportable Quantities: N/A

Sec 313 Toxic Chemicals: No

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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