

# SAFETY DATA SHEET

Revision Date: Apr. 7, 2026

This safety data sheet was created pursuant to the requirements of: US OSHA Hazard Communication Standard 2024 (29CFR 1910.1200)

## SECTION 1: Identification

**Product Name:** Gallium Metal Granules

**Product Grade:** 7N High Purity

**Purity:** 99.99999%

**Particle / Granule Size:** 3–20 mm

**Chemical Name:** Gallium

**Chemical Formula:** Ga

**CAS Number:** 7440-55-3

**EC Number:** 231-163-8

**Molecular Weight:** 69.72 g/mol

### Recommended Use:

For research, thin film deposition, semiconductor materials, specialty alloy preparation, laboratory use, and industrial material processing.

### Uses Advised Against:

Not for food, drug, cosmetic, medical implant, or household use. Use only by technically qualified personnel.

### Supplier:

Keyue Advanced Materials LLC

82N Gould St., Sheridan, WY 82801, United States

Tel: (201) 796-7100

sales@thinfilmmaterials.com

### Emergency Telephone:

Emergency Number US: 001-201-796-7100 / Europe: +32 14 57 52 99

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## SECTION 2: Hazard Identification

### 2.1 Classification of the Substance

Recommended conservative GHS classification:

Hazard Class	Category	Hazard Statement
Corrosive to Metals	Category 1	H290: May be corrosive to metals
Acute Toxicity, Oral	Category 4	H302: Harmful if swallowed
Hazardous to Aquatic Environment, Chronic	Category 3	H412: Harmful to aquatic life with long lasting effects

### 2.2 GHS Label Elements

**Signal Word:** Warning

**Hazard Pictograms:**

GHS05 — Corrosion

GHS07 — Exclamation Mark

**Hazard Statements:**

H290: May be corrosive to metals.

H302: Harmful if swallowed.

H412: Harmful to aquatic life with long lasting effects.

**Precautionary Statements:**

P234: Keep only in original packaging.

P264: Wash hands and exposed skin thoroughly after handling.

P270: Do not eat, drink, or smoke when using this product.

P273: Avoid release to the environment.

P301 + P312: IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.

P330: Rinse mouth.

P390: Absorb spillage to prevent material damage.

P406: Store in a corrosion-resistant container with a resistant inner liner.

P501: Dispose of contents/container in accordance with local, regional, national, and international regulations.

### 2.3 Other Hazards

Gallium has a low melting point and may soften or melt near warm room-temperature conditions. Molten gallium can wet or attack certain metals,

especially aluminum and aluminum alloys. Avoid contact with aluminum containers, aluminum tools, or aluminum structural parts.

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## SECTION 3: Composition / Information on Ingredients

Component	CAS No.	EC No.	Formula	Concentration
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Gallium	7440-55-3	231-163-8	Ga	≥99.99999%
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### Impurities:

Trace metallic impurities may be present at ultra-low levels consistent with 7N purity specification. Actual impurity levels should be reported in the product CoA.

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## SECTION 4: First-Aid Measures

### 4.1 Description of First-Aid Measures

#### Inhalation:

Dust generation is not expected for 3–20 mm granules under normal handling. If fumes or dust are generated during heating, machining, or processing, move the affected person to fresh air. Seek medical attention if symptoms persist.

#### Skin Contact:

Wash skin with soap and water. Remove contaminated clothing. If molten material contacts skin, cool affected area immediately with water. Do not attempt to remove solidified material from skin; seek medical attention.

#### Eye Contact:

Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek medical attention if irritation develops or persists.

#### Ingestion:

Rinse mouth. Do not induce vomiting unless instructed by medical personnel. Call a poison center or physician if feeling unwell.

### 4.2 Most Important Symptoms and Effects

May cause gastrointestinal discomfort if swallowed. Molten material may cause thermal burns. Contact with incompatible metals may cause material damage.

#### **4.3 Indication of Immediate Medical Attention**

Treat symptomatically. For molten-metal burns, seek immediate medical care.

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## **SECTION 5: Fire-Fighting Measures**

### **5.1 Suitable Extinguishing Media**

Use extinguishing media appropriate for surrounding fire: dry chemical powder, carbon dioxide, foam, or dry sand.

### **5.2 Unsuitable Extinguishing Media**

Do not use water directly on molten metal. Avoid extinguishing methods that may spread molten material.

### **5.3 Specific Hazards Arising from the Substance**

Gallium metal itself is not considered highly flammable under normal conditions. Heating in fire may generate metal oxide fumes. Containers may rupture if heated.

### **5.4 Protective Equipment for Firefighters**

Firefighters should wear self-contained breathing apparatus and full protective clothing.

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## **SECTION 6: Accidental Release Measures**

### **6.1 Personal Precautions**

Avoid direct contact with skin and eyes. Wear suitable gloves and eye protection. Prevent contact with aluminum and other incompatible materials.

### **6.2 Environmental Precautions**

Avoid release to drains, waterways, and soil. Prevent large quantities from entering the environment.

### **6.3 Methods for Containment and Cleaning Up**

For solid granules: collect mechanically and place in a suitable, labeled container.

For molten gallium: allow to cool and solidify if safe to do so, then collect mechanically.

Do not use aluminum tools or aluminum containers.

### **6.4 Reference to Other Sections**

See Section 7 for handling, Section 8 for PPE, and Section 13 for disposal.

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## **SECTION 7: Handling and Storage**

### **7.1 Precautions for Safe Handling**

Handle in a clean, dry, well-ventilated area. Avoid ingestion and unnecessary skin contact. Do not eat, drink, or smoke while handling. Wash hands after use. Avoid heating above the melting point unless appropriate engineering controls are in place.

Do not use aluminum tools, aluminum trays, or aluminum containers.

### **7.2 Conditions for Safe Storage**

Store in tightly closed original packaging. Keep in a cool, dry, well-ventilated area. Store away from strong acids, strong bases, oxidizers, halogens, and aluminum-containing materials.

#### **Recommended Container Materials:**

Glass, compatible plastics, stainless steel, or supplier-approved corrosion-resistant containers.

#### **Avoid:**

Aluminum and aluminum alloys.

### **7.3 Specific End Use**

For professional industrial and laboratory use only.

## SECTION 8: Exposure Controls / Personal Protection

### 8.1 Control Parameters

No specific occupational exposure limit has been established for gallium metal granules under normal handling conditions. If dust, fumes, or vapors are generated during heating, machining, or processing, use appropriate industrial hygiene controls.

### 8.2 Engineering Controls

Use local exhaust ventilation when heating, melting, grinding, or processing the material. Maintain good general ventilation.

### 8.3 Personal Protective Equipment

#### **Eye / Face Protection:**

Safety glasses with side shields. Use face shield when handling molten material.

#### **Skin Protection:**

Wear chemical-resistant gloves. For hot or molten material, use heat-resistant gloves and protective clothing.

#### **Respiratory Protection:**

Not normally required for solid granules. If dust or fumes are generated, use an approved respirator suitable for metal fumes or particulates.

#### **Hygiene Measures:**

Wash hands thoroughly after handling. Keep away from food and beverages.

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## SECTION 9: Physical and Chemical Properties

<b>Property</b>	<b>Value</b>
Appearance	Silvery-gray metallic granules
Odor	Odorless
Chemical Formula	Ga
Molecular Weight	69.72 g/mol
Melting Point	Approximately 29.8°C

Property	Value
Boiling Point	Approximately 2403°C
Density	Approximately 5.91 g/cm <sup>3</sup> at 20°C
Flash Point	Not applicable
Flammability	Not classified as flammable under normal conditions
Vapor Pressure	Negligible at room temperature
Solubility in Water	Insoluble
Explosive Properties	Not explosive
Oxidizing Properties	Not oxidizing
Particle Size	3–20 mm granules

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## SECTION 10: Stability and Reactivity

### 10.1 Reactivity

May be corrosive to metals, especially aluminum.

### 10.2 Chemical Stability

Stable under recommended storage and handling conditions.

### 10.3 Possibility of Hazardous Reactions

May react with strong acids, strong bases, oxidizing agents, and halogens. Contact with aluminum may cause material degradation and loss of structural integrity.

### 10.4 Conditions to Avoid

Avoid excessive heat, incompatible materials, moisture contamination, and contact with aluminum containers or aluminum equipment.

### 10.5 Incompatible Materials

Aluminum and aluminum alloys, strong acids, strong bases, oxidizing agents, halogens, and reactive metal systems.

### 10.6 Hazardous Decomposition Products

Metal oxide fumes may be generated under high-temperature processing or fire conditions.

## **SECTION 11: Toxicological Information**

### **11.1 Information on Likely Routes of Exposure**

Possible routes of exposure include ingestion, skin contact, eye contact, and inhalation of fumes or dust if generated during processing.

### **11.2 Acute Toxicity**

May be harmful if swallowed. Toxicological data for ultra-high-purity gallium metal granules is limited.

### **11.3 Skin Corrosion / Irritation**

Not expected to cause significant irritation under normal handling as solid granules. Molten material can cause thermal burns.

### **11.4 Serious Eye Damage / Eye Irritation**

Mechanical irritation may occur from particles. Molten material can cause severe thermal injury.

### **11.5 Respiratory or Skin Sensitization**

No data available.

### **11.6 Germ Cell Mutagenicity**

No data available.

### **11.7 Carcinogenicity**

Not listed as a known carcinogen by IARC, NTP, or OSHA based on available information.

### **11.8 Reproductive Toxicity**

No data available.

### **11.9 STOT — Single / Repeated Exposure**

No data available.

### **11.10 Aspiration Hazard**

Not applicable for solid metallic granules.

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## **SECTION 12: Ecological Information**

### **12.1 Toxicity**

Harmful to aquatic life with long lasting effects according to conservative GHS classification.

### **12.2 Persistence and Degradability**

Not applicable to an inorganic metal.

### **12.3 Bioaccumulative Potential**

No data available.

### **12.4 Mobility in Soil**

Expected to have low mobility due to insolubility in water.

### **12.5 Results of PBT and vPvB Assessment**

Not applicable to inorganic substances.

### **12.6 Other Adverse Effects**

Avoid uncontrolled release to the environment.

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## **SECTION 13: Disposal Considerations**

Dispose of material and contaminated packaging in accordance with local, regional, national, and international regulations.

Where possible, recover and recycle high-purity gallium material. Do not dispose of large quantities into drains, soil, or water systems. Containers contaminated with gallium should be handled as chemical waste unless fully cleaned and approved for reuse.

## SECTION 14: Transport Information

### Conservative Transport Classification:

Transport Mode	Classification
UN Number	UN2803
Proper Shipping Name	Gallium
Transport Hazard Class	8
Packing Group	III
Environmental Hazard	Not classified as marine pollutant
Label	Corrosive, Class 8

### Special Precautions for Transport:

Keep only in original or compatible packaging. Do not package with aluminum or aluminum-containing containers. Prevent leakage, contamination, and exposure to excessive heat.

### Note:

Transport classification may vary depending on jurisdiction, package size, physical form, and carrier interpretation. Final shipment classification should be confirmed with the freight forwarder or dangerous goods specialist before shipment.

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## SECTION 15: Regulatory Information

### 15.1 Safety, Health and Environmental Regulations

This product should be handled in accordance with applicable chemical safety, occupational exposure, environmental protection, and transport regulations.

### Inventory Status:

Gallium, CAS No. 7440-55-3, is listed in major chemical inventories including TSCA and EC inventories according to common supplier SDS references.

### 15.2 Chemical Safety Assessment

A chemical safety assessment has not been performed by the supplier unless otherwise stated.

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## **SECTION 16: Other Information**

### **Full Text of Hazard Statements**

H290: May be corrosive to metals.

H302: Harmful if swallowed.

H412: Harmful to aquatic life with long lasting effects.

### **Disclaimer**

The information provided in this Safety Data Sheet is based on currently available data and is believed to be accurate and reliable as of the revision date. It is intended to describe the product only in terms of health, safety, and environmental requirements. It does not constitute a warranty of product specifications or suitability for any particular application. The user is responsible for determining appropriate handling, storage, processing, transportation, and disposal conditions in accordance with applicable laws and regulations.