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## SAFETY DATA SHEET

### Section 1- IDENTIFICATION

COMPOSITION <b>Ga</b>		PRODUCT NAME <b>Gallium</b>
SUPPLIER: <b>Plasmaterials, Inc. 2268 Research Drive Livermore, CA 94550 Ph: 925-447-4030</b>	RECOMMENDED USE: <b>Laboratory Chemicals Scientific Research</b>	EMERGENCY TELEPHONE NUMBERS <b>US: 001-800-424-9300 Europe: 001-703-527-3887</b>

### Section 2- HAZARD(S) IDENTIFICATION

<b>Classification:</b> This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)
<b>Corrosive to Metals:</b> Category 1 (H290)
<b>LABEL ELEMENTS:</b> <b>Signal Word: Warning</b>
 <b>HAZARD STATEMENTS</b> -H290: May be corrosive to metals.  <b>PRECAUTIONARY STATEMENTS</b> <b>Prevention:</b> -P234: Keep only in original container -P390: Absorb spillage to prevent material damage. -P406: Store in corrosive resistant container with a resistant inner liner. <b>Hazards not otherwise classified (HNOC):</b> -None

### Section 3- COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT	CAS-No	Molecular Weight
Gallium	7440-55-3	69.72 g/mol

### Section 4- FIRST AID MEASURES

<b>GENERAL ADVICE:</b> Move out of dangerous area. Consult a physician. Show this safety data sheet to the doctor in attendance. <b>INHALATION:</b> Remove victim from exposure to fresh air. Give oxygen if breathing is difficult. If not breathing, give artificial respiration. Consult a physician. <b>SKIN CONTACT:</b> Wash off immediately with soap and plenty of water while removing all
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contaminated clothes and shoes. Consult a physician.

**EYE CONTACT:** Flush eyes with lukewarm water, lifting upper and lower lids, for at least 15 minutes as a precaution.

**INGESTION:** Rinse mouth with water. Never give anything by mouth to an unconscious person. Consult a physician.

**MOST IMPORTANT SYMPTOMS/EFFECTS:** See Section 2 and/or Section 11

**INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT**

**NEEDED:** No data available

## Section 5- FIREFIGHTING MEASURES

**Suitable Extinguishing Media:**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide

**Unsuitable Extinguishing Media:**

No Information Available

**Specific Hazards Arising from the Chemical:**

No data available

**Hazardous Combustion Products:**

No data available

**Protective Equipment & Precautions for Firefighters:**

As in any fire, Firefighters must wear full face, self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective clothing to prevent contact with skin and eyes.

## Section 6- ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas.

**Environmental Precautions:** Do not let product enter drains.

**Methods for Containment & Clean Up:** Pick up and arrange for disposal without creating dust. Sweep up and shovel. Keep in suitable, closed container for disposal.

## Section 7- HANDLING AND STORAGE

**Handling:** Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Provide appropriate exhaust ventilation at places where dust is formed.

**Storage:** Keep in a dry and well ventilated place. Keep container tightly closed. Recommended storage temperature 2-8°C

## Section 8- EXPOSURE CONTROLS/PERSONAL PROTECTION

**Exposure Guidelines:** Contains no substances with occupational exposure limit values.

**Engineering Measures:** Ensure adequate ventilation, especially in confined areas.

**Personal Protective Equipment:**

**Eye/Face Protection:** Wear appropriate protective eyeglasses or chemical safety goggles as tested and approved under appropriate government standards such as NIOSH (US) or European Standard EN166.

**Skin and Body Protection:** Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Respiratory Protection:** Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety practice. Wash hands

before breaks and at the end of the workday.

**Environmental Exposure:** Do not let product enter drains.

## Section 9- PHYSICAL AND CHEMICAL PROPERTIES

**Physical State:** Solid

**Appearance:** Light Grey

**Odor:** No information available

**Odor Threshold:** No information available

**pH:** No information available

**Melting Point/Range:** 29.8°C / 85.6°F

**Boiling Point/Range:** 2403°C / 4357°F

**Flash Point:** No information available

**Evaporation Rate:** No information available

**Flammability (solid,gas):** No information available

**Flammability or Exposure Limits:**

**Upper:** No data available

**Lower:** No data available

**Vapor Pressure:** No information available

**Vapor Density:** No information available

**Relative Density:** 5.904 g/mL at 25°C / 77°F

**Water Solubility:** No information available

**Partition coefficient; n-octanol/water:** No data available

**Auto Ignition Temperature:** No information available

**Decomposition Temperature:** No information available

**Viscosity:** No information available

**Explosive Properties:** No information available

**Oxidizing Properties:** No information available

## Section 10- STABILITY AND REACTIVITY

**Reactive Hazard:** None known, based on information available.

**Stability:** Stable under normal conditions

**Conditions to Avoid:** Incompatible materials

**Incompatible Materials:** Strong acids, strong oxidizing agents, halogens, strong bases

**Hazardous Decomposition Products:**

-Formed Under Fire Conditions: Gallium oxides

-Other Decomposition Products: No information available

**Hazardous Polymerization:** Hazardous polymerization does not occur

**Hazardous Reactions:** No information available

## Section 11- TOXICOLOGICAL INFORMATION

**Acute Toxicity:** No information available

**Dermal:** No information available

**Inhalation:** No information available

**Skin Corrosion/Irritation:** No information available

**Serious Eye Damage/Eye Irritation:** No information available

**Delayed and immediate effects as well as chronic effects from short and long term exposure:**

**Irritation:** No information available

**Sensitization:** No information available

**Carcinogenicity:** The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	OSHA
Ga	7440-55-3	Not Listed	Not Listed	Not Listed

**Mutagenic Effects:** Human, Lymphocyte, DNA Inhibition

**Reproductive Effects:** No information available

**Development Effects:** No information available

**Teratogenicity:** No information available

**STOT – single exposure:** No information available

**STOT – repeated exposure:** No information available

**Aspiration Hazard:** No information available

**Additional Information:**

**RTECS: LW860000**

Cough, shortness of breath, headache, nausea, vomiting, metallic taste, dermatitis, bone marrow depression,

Stomach irregularities based on human evidence

## Section 12- ECOLOGICAL INFORMATION

**Ecotoxicity:** No information available

**Persistence and Degradability:** No information available

**Bioaccumulation/Accumulation:** No information available

**Mobility:** No information available

**Results of PBT and vPvB assessment:** PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

**Other Adverse Effects:** No information available

## Section 13- DISPOSAL CONSIDERATIONS

**Waste Disposal Methods:** Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dispose of contaminated packaging as unused product.

## Section 14- TRANSPORT INFORMATION

**DOT: UN-No:** 2803

**Proper Shipping Name:** Gallium

**Hazard Class:** 8

**Packing Group:** III

**Poison Inhalation Hazard:** No

**IATA: UN-No:** 2803

**Proper Shipping Name:** Gallium

**Hazard Class:** 8

**Packing Group:** III

**IMDG/IMO: UN-No:** 2803

**Proper Shipping Name:** Gallium

**Hazard Class:** 8

**Packing Group:** III

**EMS No.:** F-A, S-B

## Section 15- REGULATORY INFORMATION

### **US Federal Regulations:**

**SARA 302:** No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302

**SARA 313:** This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313

**SARA 311/312 Hazardous Categorization:** Chronic Health Hazard

**California Proposition 65:** This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

### **US State Right-to-Know:**

Component	CAS-No	Massachusetts	New Jersey	Pennsylvania
Gallium	7440-55-3	-	Revision Date: 2007-03-01	Revision Date: 2007-03-01

### **HMIS (USA):**

**Health Hazard:** 0

**Chronic Health Hazard:** \*

**Flammability:** 0

**Physical Hazard:** 0

### **National Fire Protection Association (USA):**

**Health Hazard:** 0

**Fire Hazard:** 0

**Reactivity Hazard:** 0

## Section 16- OTHER INFORMATION

The above information is accurate to the best of our knowledge. However, since data, safety standards and government regulations are subject to change, the conditions of handling and use, or misuse are beyond our control, Plasmaterials, Inc. makes no warranty, either expressed or implied, with respect to the completeness or continuing accuracy of the information contained herein and disclaims all liability for reliance thereon. Users should satisfy themselves that they have all current data relevant to their particular use.

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