

# SAFETY DATA SHEET

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## SECTION 1. IDENTIFICATION

**Product Identifier:** (4N) 99.99% Gallium Fluoride Sputtering Target

**Product Code:** GA-F-04-ST

**CAS Number:** 7783-51-9

**Relevant identified uses of the substance:** Scientific research and development

Supplier details:

American Elements  
10884 Weyburn Ave.  
Los Angeles, CA 90024  
Tel: +1 310-208-0551  
Fax: +1 310-208-0351  
Emergency telephone number:  
+1 800-424-9300

## SECTION 2. HAZARDS IDENTIFICATION

Classification:

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin Corrosion/Irritation Category 1 B  
Serious Eye Damage/Eye Irritation Category 1  
Specific target organ toxicity (single exposure) Category 3  
Target Organs - Respiratory system.

Signal Word:  
Danger

Hazard Statements  
Causes severe skin burns and eye damage  
May cause respiratory irritation



Precautionary Statements  
Prevention:

Do not breathe dust/fume/gas/mist/vapors/spray  
Wash face, hands and any exposed skin thoroughly after handling  
Wear protective gloves/protective clothing/eye protection/face protection  
Use only outdoors or in a well-ventilated area

Response:

Immediately call a POISON CENTER or doctor/physician

Inhalation:

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Skin:

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower  
Wash contaminated clothing before reuse

Eyes:

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

Ingestion:

IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

Storage:

Store locked up

Store in a well-ventilated place. Keep container tightly closed

Disposal:

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

None identified

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## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component / CAS No:

Gallium fluoride (GaF<sub>3</sub>) / 7783-51-9

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## SECTION 4. FIRST AID MEASURES

General Advice:

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

Eye Contact:

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required. Keep eye wide open while rinsing. Skin Contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Call a physician immediately.

Inhalation:

Remove to fresh air. If not breathing, give artificial respiration. Call a physician or poison control center immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper

respiratory medical device.

**Ingestion:**

Immediate medical attention is required. Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person.

**Most important symptoms and effects:**

Causes burns by all exposure routes. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation

Notes to Physician: Treat symptomatically

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## **SECTION 5. FIREFIGHTING MEASURES**

**Suitable Extinguishing Media:**

Not combustible. CO 2, dry chemical, dry sand, alcohol-resistant foam.

Unsuitable Extinguishing Media: No information available

Flash Point: No information available

Method - No information available

Autoignition Temperature No information available

**Explosion Limits**

Upper No data available

Lower No data available

Sensitivity to Mechanical Impact No information available

Sensitivity to Static Discharge No information available

**Specific Hazards Arising from the Chemical:**

The product causes burns of eyes, skin and mucous membranes.

**Hazardous Combustion Products:**

Hydrogen fluoride. Gallium oxide.

**Protective Equipment and Precautions for Firefighters:**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors

**NFPA:**

Health

3

Flammability

Instability

Physical hazards

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## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

### **Personal Precautions:**

Use personal protective equipment as required. Evacuate personnel to safe areas. Avoid contact with skin, eyes or clothing. Environmental Precautions Should not be released into the environment. Do not allow material to contaminate ground water system. See Section 12 for additional

### **Ecological Information:**

Do not flush into surface water or sanitary sewer system.

### **Methods for Containment and Clean Up:**

Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

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## **SECTION 7. HANDLING AND STORAGE**

### **Handling:**

Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not breathe dust. Do not ingest. If swallowed then seek immediate medical assistance.

### **Storage:**

Corrosives area. Keep containers tightly closed in a dry, cool and well-ventilated place.

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## **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

### **Engineering Measures:**

None under normal use conditions. Ensure that eyewash stations and safety showers are close to the workstation location.

### **Personal Protective Equipment**

#### **Eye/face Protection:**

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

#### **Skin and body protection:**

Wear appropriate protective gloves and clothing to prevent skin exposure.

#### **Respiratory Protection:**

No protective equipment is needed under normal use conditions.

#### **Hygiene Measures:**

Handle in accordance with good industrial hygiene and safety practice

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## **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Physical State Solid Crystalline

Appearance No information available

Odor Odorless

Odor Threshold No information available

pH No information available

Melting Point/Range 800 °C / 1472 °F  
Boiling Point/Range ~ 1000 °C / 1832 °F  
Flash Point No information available  
Evaporation Rate Not applicable  
Flammability (solid,gas) No information available  
Flammability or explosive limits  
Upper No data available  
Lower No data available  
Vapor Pressure No information available  
Vapor Density Not applicable  
Specific Gravity 4.47 g/cm<sup>3</sup>  
Solubility No information available  
Partition coefficient; n-octanol/water No data available  
Autoignition Temperature No information available  
Decomposition Temperature No information available  
Viscosity Not applicable  
Molecular Formula GaF<sub>3</sub>  
Molecular Weight 126.72

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## SECTION 10. STABILITY AND REACTIVITY

Reactive Hazard:  
None known, based on information available

Stability:  
Moisture sensitive.

Conditions to Avoid:  
Incompatible products.

Incompatible Materials:  
Acids, Alkali metals

Hazardous Decomposition Products:  
Hydrogen fluoride, Gallium oxide

Hazardous Polymerization:  
Hazardous polymerization does not occur.

Hazardous Reactions:  
None under normal processing

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## SECTION 11. TOXICOLOGICAL INFORMATION

Acute Toxicity  
Product Information  
Component Information  
Toxicologically Synergistic Products  
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

Mutagenic Effects No information available

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - single exposure Respiratory system

STOT - repeated exposure None known

Aspiration hazard No information available

Symptoms / effects, both acute and delayed

Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation

Endocrine Disruptor Information No information available

Other Adverse Effects The toxicological properties have not been fully investigated

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## **SECTION 12. ECOLOGICAL INFORMATION**

Ecotoxicity

May cause long-term adverse effects in the environment. Do not allow material to contaminate ground water system.

Persistence and Degradability May persist

Bioaccumulation/ Accumulation No information available.

Mobility No information available.

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## **SECTION 13. DISPOSAL CONSIDERATIONS**

Waste Disposal Methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

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## **SECTION 14. TRANSPORT INFORMATION**

DOT

UN-No UN3260

Proper Shipping Name Corrosive solid, acidic, inorganic, n.o.s. Technical Name (Gallium(III) fluoride)

Hazard Class 8

Packing Group III

TDG  
UN-No UN3260  
Proper Shipping Name Corrosive solid, acidic, inorganic, n.o.s. Hazard Class 8  
Packing Group III

IATA  
UN-No UN3260  
Proper Shipping Name Corrosive solid, acidic, inorganic, n.o.s. Hazard Class 8  
Packing Group III

IMDG/IMO  
UN-No UN3260  
Proper Shipping Name Corrosive solid, acidic, inorganic, n.o.s. Hazard Class 8  
Packing Group III

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## SECTION 15. REGULATORY INFORMATION

U.S. Federal Regulations  
SARA 313 Not applicable  
SARA 311/312 Hazard Categories See section 2 for more information

CWA (Clean Water Act) Not applicable

Clean Air Act Not applicable

OSHA - Occupational Safety and Health Administration  
Not applicable

CERCLA Not applicable

U.S. Department of Transportation  
Reportable Quantity (RQ): N  
DOT Marine Pollutant N  
DOT Severe Marine Pollutant N

U.S. Department of Homeland Security  
This product does not contain any DHS chemicals.

Other International Regulations  
Mexico - Grade No information available

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## 16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. American Elements shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. COPYRIGHT 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.  
**AMERICAN ELEMENTS** | 10884 WEYBURN AVE. | LOS ANGELES, CALIFORNIA 90024  
TEL. 310-208-0551 | FAX 310-208-0351 | customerservice@americanelements.com