

# Gadolinium

## MATERIAL SAFETY DATA SHEET

### I. PRODUCT IDENTIFICATION

**Manufacturer/Supplier:**

ESPI Metals

1050 Benson Way, Ashland, OR 97520

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**Product Name:** Gadolinium

**Formula:** Gd

**CAS Number:** 7440-54-2

## II. HAZARDOUS INGREDIENTS

<b>Hazardous Component:</b>	Gadolinium	Particulates not otherwise regulated
<b>Percent (%):</b>	0-100	0-100
<b>OSHA/PEL:</b>	N/E	15 mg/m <sup>3</sup> (dust), 5 mg/m <sup>3</sup> (resp)
<b>ACGIH/TLV:</b>	N/E	10 mg/m <sup>3</sup> total dust

## III. PHYSICAL DATA

<b>Boiling Point:</b>	3266 °C
<b>Melting Point:</b>	1313 °C
<b>Specific Gravity:</b>	7.9 gm/cc
<b>Solubility in H<sub>2</sub>O:</b>	Insoluble
<b>Appearance and Odor:</b>	Silver solid, no odor

## IV. FIRE AND EXPLOSION HAZARDS DATA

**Flash Point:** N/A

**Autoignition Temperature:** N/A

**Flammable Limits: Upper:** N/A      **Lower:** N/A

**Extinguishing Media:** Dry powder, Class D Extinguisher. DO NOT USE WATER

**Special Fire Fighting Procedures:** Wear a NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing.

**Unusual Fire & Explosion Hazards:** Avoid creating fine dusts, because as a powder, this product is capable of creating a dust explosion.

## **V. HEALTH HAZARD INFORMATION**

**Effects of Exposure:**

**Acute Effects:**

**Inhalation:** May be harmful if inhaled. Good industrial hygiene practice suggests limiting exposure to all respirable particulates.

**Ingestion:** Evidence suggests low oral toxicity potential due to poor absorption by the oral route.

**Skin:** Evidence suggests low toxicity potential due to poor skin absorption. May cause skin irritation.

**Eye:** May cause eye irritation.

**Other:** Has anticoagulant effect when given intravenously.

**Chronic Effects:** No data found.

**Medical Conditions possibly aggravated by Overexposure:** No data found.

**Carcinogenicity:** NTP: No                      IARC: No                      OSHA: No                      ACGIH: No

### **EMERGENCY AND FIRST AID PROCEDURES:**

**INHALATION:** Remove from area of exposure. If not breathing, give artificial respiration. If breathing is

difficult, give oxygen. GET IMMEDIATE MEDICAL ATTENTION.

**INGESTION:** If swallowed and victim is fully conscious, induce vomiting immediately by giving two glasses of water and sticking finger down throat. GET IMMEDIATE MEDICAL ATTENTION.

**SKIN:** In case of contact, immediately wash with soap and plenty of water for at least 5 minutes. Remove contaminated clothing and shoes. Thoroughly clean contaminated clothing and shoes before reuse. Get medical attention if irritation develops or persists.

**EYE:** In case of contact, immediately flush eyes with plenty of water for at least 15 minutes using an eyewash fountain. Lift upper and lower lids and rinse well under them. Get medical attention if irritation develops or persists.

**NOTE TO PHYSICIAN:** All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

## **VI. REACTIVITY DATA**

**Stability:** Stable

**Conditions to Avoid:** Avoid creating dusts. Air and moisture sensitive.

**Incompatibility (Material to Avoid):** Strong acids, strong oxidizing materials, and halogens.

**Hazardous Decomposition Products:** The nature of decomposition products is not known.

**Hazardous Polymerization:** Will not occur.

## **VII. SPILL OR LEAK PROCEDURES**

**Steps to Be Taken in Case Material Is Released or Spilled:** Eliminate all sources of ignition. Evacuate area. Wear appropriate protective gear. Sweep solid into appropriate container. Do not use "shop" vacuum as this may cause a fire. Ventilate area. Wash spill area after material pickup is complete.

**Waste Disposal Method:** Dispose of in accordance with Local, State and Federal regulations.

## **VIII. SPECIAL PROTECTION INFORMATION**

**Respiratory Protection:** In dusting conditions, use a NIOSH/MSHA approved dust mask.

**Ventilation:** Provide adequate ventilation. Use local exhaust as needed to maintain airborne exposure below control limits.

**Protective Clothing:** Work clothing and gloves

**Eye Protection:** Safety glasses with side shields, Chemical Workers Dust-Proof Goggles (under dusting conditions).

**Other protective equipment:** Maintain a sink, safety shower and eyewash fountain in the work area. Have oxygen readily available.

## **IX. SPECIAL PRECAUTIONS**

**Precautions to Be Taken in Handling and Storage:** Store in cool dry place, in tightly sealed containers. Air and moisture sensitive. Store away from oxidizers and other materials listed under incompatibility. STORE UNDER ARGON OR OTHER INERT ENVIRONMENT. Avoid direct or prolonged contact with skin and eyes. Wash hands thoroughly after handling. Do not rub eyes with soiled hands. Do not eat, drink or smoke in the work area. Avoid creating dusts as this product, like most materials in powder form, is capable of creating a dust explosion.

**Work Practices:** Implement engineering and work practice controls to reduce and maintain concentration of exposure at low levels. Use good housekeeping and sanitation practices. 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. Maintain eyewash capable of sustained flushing, safety drench shower and facilities for washing.

**TSCA Inventory Status:** Product is TSCA certified.

**Transportation Status:** POWDER AND THIN FOIL: Flammable solid, n.o.s. (gadolinium metal), UN 1325.

**DOT Regulations:**

**Rod, Sheet:**

**Hazard Class:** None

**Pieces, Thin Foil:**

**Hazard Class:** 4.1

**Identification Number:** UN3178

**Packing Group:** III

**Proper Shipping Name:** Flammable solid, n.o.s. (Gadolinium)

**Powder:**

**Hazard Class:** 4.2

**Identification Number:** UN1383

**Packing Group:** I

**Proper Shipping Name:** Pyrophoric metal, n.o.s. (Gadolinium)

**WARNING STATEMENTS:** Flammable Solid When a Powder or Thin Foil. All Forms Will React With Water or

Dilute Acids Emitting Flammable/Explosive Hydrogen Gas.

The above information is believed to be correct, but does not purport to be all inclusive and shall be used only as a guide. ESPI shall not be held liable for any damage resulting from handling or from contact with the above product.

Issued by: S. Dierks

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