MATERIAL SAFETY DATA SHEET

I PRODUCT IDENTIFICATION

Trade Name: Gadolinium Oxide
Formula: Gd₂O₃
Chemical Nature: Lanthanides
CAS #: 12064-92-9

II HAZARDOUS INGREDIENTS

Hazardous Components % OSHA/PEL ACGIH/TLV
Gadolinium Oxide 0-100 N/E N/E

III PHYSICAL DATA

Boiling Point: No data
Specific Gravity: 7.407 g/cc at 15 °C
Vapor Pressure: Essentially 0
Appearance and Odor: White odorless powder
Melting Point: 2350 °C
Vapor Density: N/A
Solubility in H₂O: Insoluble
% Volatiles: 0

IV FIRE AND EXPLOSION HAZARDS DATA

Flash Point (Method Used): N/A
Autoignition Temperature: N/A
Flammable Limits: Upper: N/A Lower: N/A
Extinguishing Media: Not combustible. If involved in a fire, use water, carbon dioxide, dry chemical extinguishing agents, dry sand or dry ground dolomite.
Special Fire Fighting Procedures: Wear NIOSH/MSHA approved self-contained breathing apparatus, flame and chemical resistant clothing; hats, boots, and gloves. If without risk, remove material from fire area. Cool container with water from maximum distance.
Unusual Fire & Explosion Hazard: None

V HEALTH HAZARD INFORMATION

Effects of Exposure:

Acute Effects:

Inhalation: May irritate nose and throat.
Ingestion: May cause irritation of digestive tract.
Skin: May cause skin irritation. Contact with broken skin may be severely irritating.
Eye: Can cause particle irritation.
Other: Rare earth compounds may delay blood clotting.

Chronic Effects: Inhalation may cause lung fibrosis. No other chronic effects known.
Most Likely Routes of Entry: Ingestion
Medical Conditions Generally Aggravated by Exposure: None known
Carcinogenicity: NTP: No IARC: No OSHA: No

EMERGENCY AND FIRST AID PROCEDURES:
**INHALATION:** No specific information available, one should obtain medical attention.
**INGESTION:** Seek medical attention.
**SKIN:** Remove contaminated clothing, flood skin with large amounts of water for at least 15 minutes. Call a physician.
**EYE:** Immediately flush eyes, including under eyelids, with large amounts of water for at least 15 minutes. Call a physician.

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**VI REACTIVITY DATA**

**Stability:** Stable
**Conditions to Avoid:** Thermal decomposition
**Incompatibility (Material to Avoid):** Strong acids
**Hazardous Decomposition Products:** None known
**Hazardous Polymerization:** Will not occur
**Other:** Hygroscopic - absorbs H₂O and CO₂ from the air.

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**VII SPILL OR LEAK PROCEDURES**

**Steps to Be Taken in Case Material Is Released or Spilled:** Wearing full protective equipment, cover spill with dry sand or vermiculite. Mix well and carefully transfer to a container.

**Waste Disposal Method:** In accordance with Local, State and Federal Waste Disposal Regulations.

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**VIII SPECIAL PROTECTION INFORMATION**

**Respiratory Protection (Specify Type):** High efficiency particle respirator.
**Ventilation:** Laboratory fume hood

**Protective Gloves:** Rubber
**Eye Protection:** ANSI approved safety goggles

**Other Protective Equipment:** None

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**IX SPECIAL PRECAUTIONS**

**Precautions to Be Taken in Handling and Storage:** Keep container tightly closed. Store in a cool, dry, well-ventilated area. Wash thoroughly after use.

**Work Practices:** Lab coat and apron, flame and chemical resistant coveralls, eyewash capable of sustained flushing, safety drench shower and hygienic facilities for washing.

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 damages resulting from handling or from contact with the above product.

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Issued by: S. Dierks
Date: November 1995

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