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### 1. Product and Company Identification

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Trade Name: Cerium Gadolinium Alloy  
Chemical Formula: CeGd  
Recommended Use: Scientific research and development

Manufacturer/Supplier: Stanford Advanced Materials  
Address : 23661 Birtcher Dr.,  
Lake Forest, CA 92630 U.S.A

24-Hour Emergency Contact: (949) 407-8904  
(This telephone number is available 24 hours per day, 7 days per week.)

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### 2. Hazards Identification

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Signal Word: Danger



Hazard Statements: H228: Flammable solid  
H261: In contact with water releases flammable gas  
H302+H312+H332: Harmful if swallowed, in contact with skin or if inhaled  
H315 Causes skin irritation  
H319 Causes serious eye irritation  
H335: May cause respiratory irritation

Precautionary Statements: P210: Keep away from heat/sparks/open flames/hot surfaces – No smoking.  
P223: Keep away from any possible contact with water, because of violent reaction and possible flash fire.  
P231+P232: Handle under inert gas. Protect from moisture.  
P240: Ground/bond container and receiving equipment.  
P241: Use explosion-proof electrical/ventilating/lighting equipment.  
P261: Avoid breathing dust/fume/gas/mist/vapours/spray.  
P264: Wash face, hands and any exposed skin thoroughly after handling.  
P270: Do not eat, drink or smoke when using this product.  
P271: Use only outdoors or in a well-ventilated area.  
P280: Wear protective gloves/protective clothing/eye protection/face protection.  
P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.  
P302 + P352 + P312 IF ON SKIN: Wash with plenty of water. Call a POISON CENTER/doctor if you feel unwell.  
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P332+P313: If skin irritation occurs: Get medical advice/attention.  
 P335+P334: Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages.  
 P337 + P313 If eye irritation persists: Get medical advice/ attention.  
 P362: Take off contaminated clothing and wash before reuse.  
 P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.  
 P402 + P404 Store in a dry place. Store in a closed container.  
 P403 + P233 Store in a well-ventilated place. Keep container tightly closed.  
 P405 Store locked up.  
 P501 Dispose of contents/ container to an approved waste disposal plant.

HMIS Health Ratings (0-4):

Health:	1
Flammability:	3
Physical:	0

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3. Composition

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Chemical Family:	Alloy
Additional Names:	N/A
Cerium (Ce):	
Percentage:	0-100 wt%
CAS #:	7440-45-1
EC #:	231-154-9
Gadolinium (Gd):	
Percentage:	0-100 wt%
CAS #:	7440-54-2
EC #:	231-162-2

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4. First Aid Procedures

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General Treatment:	Seek medical attention if symptoms persist.
Special Treatment:	None
Important Symptoms:	None
Inhalation:	Remove victim to fresh air. Supply oxygen if breathing is difficult. Seek medical attention.
Ingestion:	Give one to two glasses of water and induce vomiting. Never induce vomiting or give anything by mouth to an unconscious person. Seek medical attention.
Skin:	Wash affected area with mild soap and water. Remove any contaminated clothing. Seek medical attention.
Eyes:	Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek medical attention.

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### 5. Firefighting Measures

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Flammability:	Non-flammable, except as powder
Extinguishing Media:	Do not use water for metal fires – use CO <sub>2</sub> , dry powder, dry sand, extinguishing powder.
Spec. Fire Fighting Procedure:	Use full-face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. See section 10 for decomposition products.

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### 6. Accidental Release Measures

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If Material Is Released/Spilled:	Wear appropriate respiratory and protective equipment specified in special protection information. Isolate spill area and provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for disposal. Take care not to raise dust.
Environmental Precautions:	Isolate runoff to prevent environmental pollution.

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### 7. Handling and Storage

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Handling Conditions:	Wash thoroughly after handling.
Storage Conditions:	Store in a cool dry place in a tightly sealed container. Store apart from materials and conditions listed in section 10.
Work/Hygienic Maintenance:	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.
Ventilation:	Provide sufficient ventilation to maintain concentration at or below threshold limit.

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### 8. Exposure Controls and Personal Protection

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Permissible Exposure Limits:	N/A
Threshold Limit Value:	N/A
Special Equipment:	None
Respiratory Protection:	Dust Respirator
Protective Gloves:	Rubber gloves
Eye Protection:	Safety glasses or goggles
Body Protection:	Protective work clothing. Wear close-toed shoes and long sleeves/pants.

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### 9. Physical and Chemical Characteristics

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Color	Grey
Form:	Powder, Granules, Pellets, Sputtering target, Custom parts
Odor:	N/A
Water Solubility:	N/A
Boiling Point:	N/A
Melting Point:	N/A
Flash Point:	N/A
Autoignition Temperature:	N/A
Density:	N/A
Molecular weight:	N/A

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## 10. Reactivity

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Stability:	Stable under recommended storage conditions
Reacts With:	Strong oxidizing agents, Strong acids, Halogens, Zinc, Water.
Incompatible Conditions:	Excess heat. Keep away from open flames, hot surfaces and sources of ignition. Exposure to air. Exposure to moisture.
Hazardous Decomposition Products:	Heavy metal oxides, Cerium Oxides, Gadolinium Oxides

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## 11. Toxicological Information

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Potential Health Effects:	
Eyes:	Causes serious irritation
Skin:	Harmful in contact with skin
Ingestion:	Harmful if swallowed
Inhalation:	Harmful if inhaled
Chronic:	N/A
Signs & Symptoms:	N/A
Aggravated Medical Conditions:	N/A
Median Lethal Dose:	N/A
Carcinogen:	N/A

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## 12. Ecological Information

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Aquatic Toxicity:	N/A
Persistent Bioaccumulation Toxicity:	No
Very Persistent, Very Bioaccumulative:	No
Notes:	N/A

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## 13. Disposal Considerations

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Dispose of in accordance with local, state, national, and international regulations.

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## 14. Transportation Data

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Hazardous: Hazardous as powder only



Hazard Class:	4.3 Dangerous when wet materials
Packing Group:	II
UN Number:	UN3208
Proper Shipping Name:	Metallic substance, water-reactive, n.o.s (Cerium Gadolinium)

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## 15. Regulatory Information

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Sec 302 Extremely Hazardous:	No
Sec 304 Reportable Quantities:	N/A
Sec 313 Toxic Chemicals:	No

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## 16. Other Information

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This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.

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