1. Product and Company Identification

Trade Name: Cerium nitride
Chemical Formula: CeN
Recommended Use: Scientific research and development

Manufacturer/Supplier: LTS Research Laboratories, Inc.
Street: 37 Ramland Road
City: Orangeburg
State: New York
Zip Code: 10962
Country: USA
Tel #: 855-587-2436 / 855-lts-chem

24-Hour Emergency Contact: 800-424-9300 (US & Canada)
+1-703-527-3887 (International)

2. Hazards Identification

Signal Word: Danger

Hazard Statements: H261 In contact with water releases flammable gas
H303 May be harmful if swallowed

Precautionary Statements: P210 Keep away from heat/sparks; No smoking
P232 Protect from moisture
P261 Avoid breathing dust/fume/vapor
P301+P313 If swallowed: Get medical advice/attention

HMIS Health Ratings (0-4):
- Health: 2
- Flammability: 2
- Physical: 2

3. Composition

Chemical Family: Ceramic
Additional Names: N/A

Cerium nitride (CeN):
- Percentage: 100 wt%
- CAS #: 25764-08-3
- EC #: 247-243-0
4. First Aid Procedures

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.
Ingestion: Give one to two glasses of water and induce vomiting. Never induce vomiting or give anything by mouth to an unconscious person.
Skin: Wash affected area with mild soap and water. Remove any contaminated clothing.
Eyes: Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing

5. Fire and Explosion Hazards Data

Flammability: Contact with water releases flammable gas
Flash Point: N/A
Autoignition Temperature: N/A
Extinguishing Media: Do not use water – use CO₂, 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.

6. Accidental Release Measures

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.

7. Handling and Storage

Handling Conditions: Wash thoroughly after handling.
Storage Conditions: Store in a cool dry place in a tightly sealed container.
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.

8. Exposure Controls and Personal Protection

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

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>N/A</td>
</tr>
<tr>
<td>Form</td>
<td>Powder, Granules, Pellets, Sputtering target, Custom parts</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>Possible reaction</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>N/A</td>
</tr>
<tr>
<td>Melting Point</td>
<td>N/A</td>
</tr>
<tr>
<td>Density</td>
<td>N/A</td>
</tr>
<tr>
<td>Molecular weight</td>
<td>154.12 g/mol</td>
</tr>
</tbody>
</table>

10. Reactivity

| Stability              | Stable under recommended storage conditions |
| Reacts With            | Oxidizing agents, Acids                     |
| Incompatible Conditions| Moisture                                    |
| Hazardous Decomposition Products | Ammonia gas, Metal oxide fume |

11. Toxicological Information

Potential Health Effects:
- **Eyes:** May cause irritation
- **Skin:** May cause irritation
- **Ingestion:** May cause irritation
- **Inhalation:** May cause irritation
- **Chronic:** N/A

| Signs & Symptoms       | N/A                                        |
| Aggravated Medical Conditions | N/A          |
| Median Lethal Dose     | N/A                                        |
| Carcinogen             | N/A                                        |

12. Ecological Information

Ecological data is not available.

13. Disposal Considerations

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

14. Transportation Data

Hazardous: Hazardous for transportation

<table>
<thead>
<tr>
<th>Hazard Class</th>
<th>4.3 Substances which, in contact with water, release flammable gas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packing Group</td>
<td>III</td>
</tr>
<tr>
<td>UN Number</td>
<td>UN3134</td>
</tr>
<tr>
<td>Proper Shipping Name</td>
<td>Water-reactive solid, n.o.s. (Cerium nitride)</td>
</tr>
</tbody>
</table>
15. Regulatory Information

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

16. Other Information
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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