# MATERIAL SAFETY DATA SHEET

## Section 1- PRODUCT IDENTIFICATION

<table>
<thead>
<tr>
<th>COMPOSITION</th>
<th>PRODUCT NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sm</td>
<td>Samarium</td>
</tr>
</tbody>
</table>

## Section 2- HAZARDOUS INGREDIENTS

Note: Products under normal conditions do not represent an inhalation, ingestion or contact health hazard.

<table>
<thead>
<tr>
<th>MATERIAL OR COMPONENT</th>
<th>CAS NUMBER</th>
<th>WT%</th>
<th>EXPOSURE LIMITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Samarium</td>
<td>7440-19-9</td>
<td>100%</td>
<td>OSHA PEL (Mg/M3)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>No Data</td>
</tr>
</tbody>
</table>

## Section 3- PHYSICAL DATA

<table>
<thead>
<tr>
<th>MATERIAL IS (AT NORMAL CONDITIONS)</th>
<th>APPERANCE AND ODOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Liquid</td>
<td>Whitish-grey metallic solid. Odorless</td>
</tr>
<tr>
<td>□ Solid</td>
<td></td>
</tr>
<tr>
<td>□ Gas</td>
<td></td>
</tr>
<tr>
<td>□ Other</td>
<td></td>
</tr>
<tr>
<td>MELTING POINT (BASE METAL)</td>
<td>1072°</td>
</tr>
<tr>
<td>SPECIFIC GRAVITY</td>
<td></td>
</tr>
</tbody>
</table>

## Section 4- FIRE AND EXPLOSION

- **Flash Point (Method Used)**: N/A
- **Extinguishing Media**: DO NOT USE WATER!
  - Agents for metal fires such as powdered limestone, sand, graphite, MET-L-X, or TEC.
- **SPECIAL FIRED FIGHTING PROCEDURES**
  - DO NOT USE WATER. Smother fire with Class D fire extinguishing or allow to burn.
- **UNUSUAL FIRE AND EXPLOSION HAZARDS**
  - Explosions can occur if water is added to a samarium fire. Finely divided samarium dust powders, like most metal powders are potential explosion hazards when exposed to sparks, open flame or high heat source.

## Section 5- REACTIVITY DATA

- **STABILITY**: Stable
- **INCOMPATABILITY (MATERIALS TO AVOID)**
  - Halocarbons reducing agents, strong acids & halogens
- **CONDITIONS TO AVOID**
  - Ignition sources, sparks, open flames. Samarium metal can burn in air, carbon dioxide, or nitrogen. Contact with moisture/water.
- **HAZARDOUS DECOMPOSITION PRODUCTS**: NONE
Section 6- HEALTH HAZARD GUIDE

**MAJOR EXPOSURE HAZARD**

- Inhalation
- Skin
- Skin Absorption
- Eye Contact
- Ingestion

**EFFECTS OF OVEREXPOSURE**

**INHALATION:** A mild irritant. Extreme overexposure can cause pulmonary edema. No data available for long term effects.

**DERMAL/EYE CONTACT:** A mild irritant to skin and eyes. May be corrosive in contact with moist skin.

**OTHER:** As a lanthanon it may cause impairment of blood clotting.

**EMERGENCY & FIRST AID PROCEDURES**

**INHALATION:** Remove from exposed area to fresh air.

**INGESTION:** Give 1-2 glasses of milk or water and induce vomiting.

**SKIN CONTACT:** Brush material off skin. Wash affected area with soap & water.

**EYE CONTACT:** Flush eyes with lukewarm water lifting up the upper and lower lids for at least fifteen minutes.

Section 7- SPILL OR LEAK PROCEDURES

**SPILL OR LEAK PROCEDURES**

Scoop or sweep up spill and place in container for disposal. Take care not to raise dust.

**WASTE DISPOSAL METHODS**

Powders should be mixed with an excess of sand or soil and disposed of with normal refuse, in accordance with appropriate regulations.

Section 8- SPECIAL PROTECTION

**RESPIRATORY**

NIOSH-MESA approved respirator providing protection against dust of not less than 0.05mg/m³.

**VENTILATION**

Local Exhaust: To control build up of dusts. Mechanical: Adequate for no-dusty work.

**EYE PROTECTION & PROTECTIVE CLOTHING**

Wear Safety glasses for eyes. Wear neoprene gloves on hands. Protective gear to avoid skin and clothing contamination.

Section 9- SPECIAL PRECAUTIONS

**WORK/HYGIENIC/MAINTENANCE PRACTICES**

Store in a cool dry area. Keep containers closed. Do not use tobacco or food in work area. Wash thoroughly before eating or smoking.

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