

## ***Material Safety Data Sheet***

Identity: Samarium oxide

Formula: Sm<sub>2</sub>O<sub>3</sub>

### SECTION I - GENERAL INFORMATION

Manufacturer: [Stanford Advanced Materials](#) (SAM)

The information below is believed to be accurate and represents the best information available to SAM. However, SAM makes no warranty, expressed or implied with respect to such information and assumes no liability resulting from its use.

### SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Form Weight:

CAS #	OSHA PEL	ACGIH TLV	OTHER LIMITS	%
12060-58-1	NE	NE	NE	100%

### SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

Physical States: Solid

Boiling Point: 4118 °C

Vapor Pressure (mmHg): Essentially 0

Melting Point: 2300 °C

Percent Volatile: 0

Evaporation Rate (Butyl Acetate=1): 0

Specific Gravity (water=1): 8.347 gm/cc

Solubility in water: Insoluble

*Appearance and odor:* White to tan powder, no odor.

### SECTION IV - FIRE AND EXPLOSION HAZARD DATA:

Flash Point: N/A      Explosive Limits: LEL:      UEL:

*Extinguishing Media:*

Oxides do not burn. Use water, carbon dioxide, dry chemical extinguishing agents, dry sand, or dry ground dolomite.

*Special Fire Fighting Procedures:*

No special firefighting procedures needed. Use normal procedures which include wearing NIOSH/MSHA approved self-contained breathing apparatus, flame and chemical resistant clothing, hats, boots, and gloves.

SECTION V - REACTIVITY DATA

*Stability:* Stable

*Conditions to Avoid (instability):* Thermal decomposition

*Incompatibility (Materials to Avoid):* Moisture, strong acids, and carbon dioxide.

*Hazardous Polymerization:*

*Hazardous Decomposition or Byproducts:* None Recorded

*Conditions to avoid (hazardous polymerization):* Will not occur.

*Other:* Hygroscopic

SECTION VI - HEALTH HAZARD DATA

*Route of Exposure:*

*Signs and Symptoms of Overexposure:*

*Inhalation:*

*Acute:* May cause irritation.

*Chronic:* None known.

*Emergency Procedures:* No data available, however one should obtain medical attention.

*Ingestion:*

*Acute:* May cause irritation.

*Chronic:* None known.

*Emergency Procedures:* No specific information available, one should obtain medical attention.

*Skin:*

*Acute:* May cause irritation.

*Chronic:* No chronic health effects recorded.

*Emergency Procedures:* Remove contaminated clothing, brush material of skin, and wash affected area with mild soap and water. Seek medical attention if symptoms persist.

*Eye:*

*Acute:* May cause irritation

*Chronic:* No chronic health effects recorded.

*Emergency Procedures:* Flush eyes and under eyelids with lukewarm water for at least 15 minutes. Seek medical attention if irritation persists.

*Target Organ:*

*Carcinogenicity:* NTP? No      IARC Monographs? No      OSHA Regulated? No

*Medical Conditions Aggravated by Exposure:* Pre-existing respiratory disorders.

*Most Likely routes of entry:* Skin, Eyes, and Inhalation.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

*Steps to be taken in case material is released or spilled:*

Wear appropriate respiratory and protective equipment specified in section VIII-Control Measures. Isolate spill area, provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for proper disposal. Take care not to raise dust. Take care not to raise dust. Use non-sparking tools.

*Waste disposal method:*

Dispose of in accordance with state, local, and federal regulations.

*Hazard Label Information:*

Store in cool, dry area and in tightly sealed container. Wash thoroughly after handling.

SECTION VIII - CONTROL MEASURES

*Protective Equipment Summary (Hazard Label Information):*

NIOSH/MSHA approved respirator, impervious gloves, safety glasses, clothes to prevent contact.

*Respiratory Protection (Specify Type):* NIOSH – approved dust respirator.

*Ventilation:*

Local Exhaust: To maintain concentration at low exposure levels.

Mechanical (General): Recommended.

*Engineering:* Use ventilation to maintain exposure levels within OSHA limits.

*Work/Hygienic/Maintenance 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 or smoking. Do not blow dust off clothing or skin with compressed air.

Please be advised that N/A can either mean Not Applicable or No Data Has Been Established