

SUPPLIER



MATERIAL SAFETY DATA SHEET

GENERATED 03/15/2011, **REVISION** 04/12/1995, **DATE CREATED** 11/21/1990

SECTION I - PRODUCT IDENTIFICATION

Samarium oxide, powder and pieces

PRODUCT NAME: Samarium oxide, powder and pieces

PRODUCT CODE: S-MSDS0058

REFERENCE #: 12060-58-1

MANUFACTURER INFORMATION

COMPANY NAME: Materion Advanced Chemicals Inc.
1316 W. St. Paul Avenue
Milwaukee, WI 53233

EMERGENCY CONTACT: CHEMTREC (800)424-9300

ALTERNATE EMERGENCY CONTACT: Materion Advanced Chemicals Inc. (414)289-9800

CHEMICAL FAMILY: Metal oxide

CAS NUMBER: 12060-58-1

FORMULA: Sm₂O₃

MOLECULAR WEIGHT: 348.69

SYNONYMS

Samarium oxide, Samaria

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Samarium oxide, powder and pieces

Hazardous Components (Chemical Name)	CAS #	Concentration	OSHA PEL	ACGIH TLV	Other Limits
Samarium oxide	12060-58-1	0.0 -100.0 %	NE	NE	NE

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS**Samarium oxide, powder and pieces**

<u>PHYSICAL STATES:</u>	[] Gas	[] Liquid	[X] Solid
<u>MELTING POINT:</u>	N.A.		
<u>BOILING POINT:</u>	N.A.		
<u>SPECIFIC GRAVITY (WATER = 1):</u>	8.34 g/cc		
<u>VAPOR PRESSURE (VS. AIR OR MM HG):</u>	NA		
<u>VAPOR DENSITY (VS. AIR = 1):</u>	NA		
<u>EVAPORATION RATE (VS BUTYL ACETATE=1):</u>	NA		
<u>SOLUBILITY IN WATER:</u>	insoluble		
<u>SOLUBILITY NOTES</u>			
<u>PERCENT VOLATILE:</u>	N.A.		
<u>APPEARANCE AND ODOR</u>			

White powder or pieces with no odor.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA**Samarium oxide, powder and pieces**

<u>FLASH PT:</u>	N.A.	Method Used:	Unknown
<u>EXPLOSIVE LIMITS:</u>	LEL: NA	UEL:	NA
<u>EXTINGUISHING MEDIA</u>			

USE: Not applicable. Use suitable extinguishing media for surrounding materials and type of fire.

SPECIAL FIRE FIGHTING PROCEDURES

Firefighters must wear full face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. Fumes from fire are hazardous. Isolate runoff to prevent environmental pollution.

UNUSUAL FIRE AND EXPLOSION HAZARDS

When heated to decomposition, samarium oxide may emit toxic fumes.

HAZARDOUS COMBUSTION PRODUCTS

SECTION V - REACTIVITY DATA

Samarium oxide, powder and pieces

STABILITY:Unstable [☐]Stable [☒]**CONDITIONS TO AVOID - INSTABILITY**

None

INCOMPATIBILITY - MATERIALS TO AVOID

Strong acids.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS

None recorded

HAZARDOUS POLYMERIZATION:Will occur [☐]Will not occur [☒]**CONDITIONS TO AVOID - HAZARDOUS POLYMERIZATION**

None

SECTION VI - HEALTH HAZARD DATA

Samarium oxide, powder and pieces

HEALTH HAZARDS (ACUTE AND CHRONIC)

To the best of our knowledge the chemical, physical and toxicological properties of samarium oxide have not been thoroughly investigated and recorded.

Samarium is considered a rare earth metal. These metals are moderately to highly toxic. The symptoms of toxicity of the rare earth elements include writhing, ataxia, labored respiration, walking on the toes with arched back and sedation. Oral or intraperitoneal doses of 5 to 10 g/kg of dysprosium oxide had no pathological effects in mice and daily doses of 2 g/kg were harmless. Rare earth oxides are much less toxic than chlorides or citrates. The rare earth elements exhibit low toxicity by ingestion exposure. However, the intraperitoneal route is highly toxic while the subcutaneous route is poison to moderately toxic. The production of skin and lung granulomas after exposure to them requires extensive protection to prevent such exposure. (Sax, Dangerous Properties of Industrial Materials, eighth edition)

INHALATION:

Acute: May cause irritation to the upper respiratory system and mucous membranes.

Chronic: May cause writhing, ataxia, labored respiration, walking on toes with arched back, sedation,

pneumonconiosis, hemoglobinemia and lung granuloma.

INGESTION:

Acute: Considered to have low toxicity by ingestion.

Chronic: May act as a blood anticoagulant.

SKIN:

Acute: May cause irritation.

Chronic: No chronic health effects recorded.

EYE:

Acute: May cause irritation.

Chronic: No chronic health effects recorded.

TARGET ORGANS: May affect the blood and lungs.

CARCINOGENICITY: NTP? No IARC Monographs? No OSHA Regulated? No

RECOMMENDED EXPOSURE LIMITS

See "Section II"

LD 50 / LC 50

No toxicity data recorded.

SIGNS AND SYMPTOMS OF EXPOSURE

INHALATION: May cause a red, dry throat, congestion and coughing.

INGESTION: May affect the coagulation time of the blood.

SKIN: May cause redness, burning and itching.

EYE: May cause redness, burning, itching and watering.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE

Pre-existing lung disorders.

EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove victim to fresh air; keep warm and quiet; give oxygen if breathing is difficult and seek medical attention if symptoms persist.

INGESTION: Give 1-2 glasses of milk or water and induce vomiting; seek medical attention if symptoms persist. Never induce vomiting or give anything by mouth to an unconscious person.

SKIN: Remove contaminated clothing; brush material off skin; wash affected area with mild soap and water; seek medical attention if symptoms persist.

EYE: Flush eyes with lukewarm water, lifting upper and lower eyelids, for at least 15 minutes. Seek medical attention if symptoms persist.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

Samarium oxide, powder and pieces

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 and 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.

WASTE DISPOSAL METHOD

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

HAZARD LABEL INFORMATION:

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

PRECAUTIONS TO BE TAKEN IN HANDLING

None

PRECAUTIONS TO BE TAKEN IN STORING

OTHER PRECAUTIONS

None

SECTION VIII - CONTROL MEASURES

Samarium oxide, powder and pieces

PROTECTIVE EQUIPMENT SUMMARY - HAZARD LABEL INFORMATION:

NIOSH approved respirator Impervious gloves Safety glasses Clothes to prevent skin contact

RESPIRATORY EQUIPMENT (SPECIFY TYPE)

NIOSH - approved dust respirator

EYE PROTECTION

Safety glasses

PROTECTIVE GLOVES

Rubber gloves

OTHER PROTECTIVE CLOTHING

Protective gear suitable to prevent contamination

VENTILATION

Local Exhaust: To maintain concentration at low exposure levels Special: None

Mechanical (Gen): Recommended

Other: None

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 and smoking. Do not blow dust off clothing or skin with compressed air.

SECTION IX - ADDITIONAL COMMENTS

Samarium oxide, powder and pieces

No data available.

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