

**MATERIAL SAFETY DATA SHEET (MSDS)****SAMARIUM OXIDE AR****1 - Chemical Product**

MSDS Name: Samarium(iii) oxide  
Synonym: Samaria; Samarium Sesquioxide; Samarium Trioxid

Cas NO: 12060-58-1

Product Coad: S0177400025

Molecular Formula: O3Sm2  
Molecular Weight: 348.70

**2 - COMPOSITION, INFORMATION ON INGREDIENTS**

CAS#	Chemical Name	content	EINECS#
12060-58-1	Samarium(III) oxide	99.9	235-043-6

**Section 3 - HAZARDS IDENTIFICATION****EMERGENCY OVERVIEW**

Hygroscopic (absorbs moisture from the air). The toxicological properties of this material have not been fully investigated.

**Potential Health Effects**

Eye: Dust may cause mechanical irritation.

Skin: May cause skin irritation.

Ingestion: May cause irritation of the digestive tract. The toxicological properties of this substance have not been fully investigated.

Inhalation: Inhalation of dust may cause respiratory tract irritation.

Chronic: No information found.

**4 - FIRST AID MEASURES**

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.  
Skin: Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water.

Never give anything by mouth to an unconscious person. Get medical aid immediately.

Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician:

**Section 5 - FIRE FIGHTING MEASURES**

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Substance is noncombustible.

Extinguishing Media: In case of fire, use water, dry chemical, chemical foam, or alcohol-resistant foam.

**6 - ACCIDENTAL RELEASE MEASURES**

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up, then place into a suitable container for disposal. Avoid generating dusty conditions. Provide ventilation.

**Section 7 - HANDLING and STORAGE**

Handling: Wash thoroughly after handling. Use with adequate ventilation.

Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation.

Storage: Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

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**MATERIAL SAFETY DATA SHEET (MSDS)****SAMARIUM OXIDE AR****8 - EXPOSURE CONTROLS, PERSONAL PROTECTION**

Engineering Controls: Use adequate ventilation to keep airborne concentrations low.

Exposure Limits CAS# 12060-58-1: Personal Protective Equipment Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**9 - PHYSICAL AND CHEMICAL PROPERTIES**

Physical State: Powder

Color: slightly beige

Odor: odorless

pH: Not available.

Vapor Pressure: Not available.

Viscosity: Not available.

Boiling Point: Not available.

Freezing/Melting Point: 2300 deg C

Autoignition Temperature: Not available.

Flash Point: Not available.

Explosion Limits, lower: Not available.

Explosion Limits, upper: Not available.

Decomposition Temperature:

Solubility in water: insoluble

Specific Gravity/Density: 8.3470g/cm<sup>3</sup>

**10 - STABILITY AND REACTIVITY**

Chemical Stability: Stable under normal temperatures and pressures. Absorbs carbon dioxide from the air.

Conditions to Avoid: Incompatible materials, dust generation, moisture, strong acids.

Incompatibilities with Other Materials: Strong oxidizing agents, carbon dioxide.

Hazardous Decomposition Products: Not known.

Hazardous Polymerization: Has not been reported.

**11 - TOXICOLOGICAL INFORMATION**

RTECS#:

CAS# 12060-58-1: VP3153000 LD50/LC50:

CAS# 12060-58-1: Oral, rat: LD50 = >5 gm/kg.

Carcinogenicity:

Samarium(III) oxide - Not listed by ACGIH, IARC, or NTP.

Other: See actual entry in RTECS for complete information.

**12 - ECOLOGICAL INFORMATION****13 - DISPOSAL CONSIDERATIONS**

Dispose of in a manner consistent with federal, state, and local regulations.

**14 - TRANSPORT INFORMATION**

IATA

Not regulated as a hazardous material.

IMO

Not regulated as a hazardous material.

RID/ADR

Not regulated as a hazardous material.

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**MATERIAL SAFETY DATA SHEET (MSDS)****SAMARIUM OXIDE AR****15 - REGULATORY INFORMATION**

European/International Regulations  
European Labeling in Accordance with EC Directives  
Hazard Symbols: Not available.  
Risk Phrases:  
Safety Phrases:  
S 24/25 Avoid contact with skin and eyes.  
WGK (Water Danger/Protection)  
CAS# 12060-58-1: No information available.  
Canada  
CAS# 12060-58-1 is listed on Canada's DSL List.  
CAS# 12060-58-1 is not listed on Canada's Ingredient Disclosure List.  
US FEDERAL  
TSCA  
CAS# 12060-58-1 is listed on the TSCA inventory.

**16: Other Information**

**References:** Laboratory Reagent

In accordance with REACH Regulation (CE) N° 1907/2006 and with CLP Regulation (CE) N° 1272/2008

**DISCLAIMER:**

- **SUVCHEM** Products are to be used as Lab Chemicals for R&D only. Not for drug, medicinal, household or other uses.
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