

Material Safety Data Sheet

Identity: Lanthanum aluminate

Formula: LaAlO₃

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 we assume no liability resulting from its use.

Section II - Hazardous Ingredients/Identity Information

<u>Hazardous Components</u>	<u>CAS #</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>%</u>
Lanthanum Aluminate	12003-65-5	10mg (AL)/m ³	10mg (AL)/m ³	100

Section III - Physical/Chemical Characteristics

Boiling Point: NE or NA

Specific Gravity (water=1): NE

Melting Point: NE or NA

Vapor Pressure: NA

Physical States: Solid

Vapor Density: NA

Evaporation Rate: NA

Solubility in water: Insoluble

Percent Volatile: NE or NA

Appearance and odor: Tan powder, odorless

Section IV - Fire and Explosion Hazard Data:

Flash Point: NA*Extinguishing Media:* USE: Not applicable. Use suitable extinguishing media for surrounding materials and type of fire.*Special Firefighting 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:* None.

Section V - Reactivity Data

Stability: Stable

Conditions to Avoid – Instability: None

Incompatibility - Materials to Avoid: None determined *Hazardous*

Decomposition or Byproducts: None determined *Conditions to*

avoid – Hazardous Polymerization: Will not occur

Section VI - Health Hazard Data

Route(s) of entry: Inhalation? Yes Skin? Yes Eyes? Yes Ingestion? Yes Other: N

Health Hazards (Acute and Chronic):

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

Lanthanum 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. 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)

Aluminum compounds have many commercial uses and are commonly found in industry. Inhalation of fine aluminum oxide particles is associated with Shaver's disease. (Sax, Dangerous Properties of Industrial materials, eighth edition)

Inhalation:

Acute: May cause irritation to mucous membranes and upper respiratory tract. Dusts may cause lung damage such as lung granulomas and pulmonary fibrosis. Large doses may cause writhing, loss of muscle coordination, labored respiration, sedation, hypo tension and cardiovascular collapse.

Chronic: Prolonged or repeated inhalation may cause writhing, loss of muscle coordination, labored respiration, sedation, hypotension and cardiovascular collapse.

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

Ingestion:

Acute: May cause gastrointestinal irritation and nervous afflictions.

Chronic: May affect the coagulation rate of the blood

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

Skin:

Acute: May cause irritation, rashes, legions, and skin granulomas.

Chronic: May cause dermatitis.

Emergency Procedures: Remove contaminated clothing, flood skin with water and mild soap. If irritation persists, seek medical attention.

Eyes:

Acute: May cause irritation.

Chronic: None known.

Emergency Procedures: Flush eyes with lukewarm water including under eyelids for at least 15 minutes. If irritation persists, seek medical attention.

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

Carcinogenicity/Other information: No data available.

LD 50/LC 50: Toxicity data recorded

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 and extinguish sources of ignition. 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. 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. Store in tightly sealed container. Wash thoroughly after handling.

TSCA Status: Components of this product are listed on the Toxic Substance Control Act (TSCA) inventory

Section VIII - Control Measures

Protective Equipment Summary - Hazard Label Information:

NIOSH/MSHA approved respirator, Impervious gloves, Safety glasses, clothes to prevent skin contact.

Respiratory Protection (Specify Type) - NIOSH - approved dust respirator.

Ventilation:

Local Exhaust: To maintain concentration at low exposure levels.

Mechanical (General): Recommended.

Protective Gloves: Rubber gloves. *Eye Protection:* Safety glasses.

Other Protective Clothing or Equipment: Protective gear suitable to prevent contamination.

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.