


**ELECTRONIC SPACE PRODUCTS INTERNATIONAL**

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**MATERIAL SAFETY DATA SHEET**
**I PRODUCT IDENTIFICATION**

<b>Trade Name:</b>	Lanthanum Aluminate	<b>CAS Number:</b>	71496-78-1
<b>Chemical Family:</b>	Metal aluminate	<b>Molecular Formula:</b>	LaAlO <sub>3</sub>
<b>Molecular Weight:</b>	213.89		

**II HAZARDOUS INGREDIENTS**

Hazardous Components	OSHA PEL	ACGIH TLV	Other Limits	Percent
Lanthanum Aluminate	10 mg(Al)	15 mg (Al)	5 mg/m <sup>3</sup> res	100.0

Sec.302 (EHS): No      Sec.304 RQ: No      Sec.313: Yes

**III PHYSICAL DATA**

<b>Boiling Point:</b>	Unknown	<b>Specific Gravity (H<sub>2</sub>O=1):</b>	Unknown
<b>Vapor Density (Air=1):</b>	N/A	<b>Vapor Pressure:</b>	N/A
<b>Solubility in H<sub>2</sub>O:</b>	Insoluble	<b>Evaporation Rate:</b>	N/A
<b>Appearance and Odor:</b>	Tan odorless powder		

**IV FIRE AND EXPLOSION HAZARDS DATA**

**Flash Point Method:** N/A  
**Flammable Limits in Air % by Volume:** N/A  
**Extinguishing Media:** Material does not burn.

**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:** None

## V HEALTH HAZARD INFORMATION

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**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 the respiratory tract and mucous membranes. Dusts may cause lung damage such as lung granulomas and pulmonary fibrosis. Large doses may cause writhing, loss of muscle coordination, labored respiration, sedation, hypotension, and cardiovascular collapse.

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

**Ingestion: Acute:** May cause gastrointestinal irritation and nervous afflictions.

**Chronic:** May affect the coagulation rate of the blood.

**Skin: Acute:** May cause irritation, rashes, lesions and skin granulomas.

**Chronic:** May cause dermatitis.

**Eye: Acute:** May cause irritation.

**Chronic:** No chronic health effects recorded.

**Target Organs:** May affect the respiratory system, blood and skin.

**Route(s) of Entry:** **Inhalation?** Yes      **Skin?** No      **Ingestion?** Yes      **Other?** No

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

**Signs and Symptoms of Exposure:** Inhalation - coughing. Eyes -particle irritation. Ingestion - unknown.

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

### **EMERGENCY AND FIRST AID PROCEDURES:**

**EYES:** Flush eyes with lukewarm water, lifting upper and lower lids, for at least 15 minutes. Seek medical attention if irritation persists.

**SKIN:** Remove contaminated clothing, brush material off skin, wash affected area with mild soap and water. Seek medical attention if irritation persists.

**INGESTION:** 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.

**INHALATION:** Remove to fresh air, Keep warm and quiet, give oxygen if breathing is difficult and seek medical attention.

## VI REACTIVITY DATA

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**Stability:** Stable

**Conditions to Avoid:** CO<sub>2</sub>, Air, moisture

**Incompatibility (Material to avoid):** Strong acids, bases.

**Hazardous Decomposition Products:** None.

**Hazardous Polymerization:** Will not occur.

## VII SPILL OR LEAK PROCEDURES

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**Steps to be Taken in Case Material is Released or Spilled:** Wear appropriate respiratory and protective equipment specified in section VIII. 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:** In accordance with local, state and federal regulations.

## VIII SPECIAL PROTECTION INFORMATION

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**Respiratory Protection:** NIOSH approved dust respirator.

**Ventilation: Local Exhaust:** To maintain concentration at low exposure levels. **Mechanical:** Recommended. **Special:** None

**Other:** None

**Protective Gloves:** Recommended

**Eye Protection:** If dusting occurs

**Other protective Clothing or Equipment:** None

## IX SPECIAL PRECAUTIONS

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**Precautions to be Taken in Handling and Storage:** Store in a tight seal, dry container.

**Work/Hygiene 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.

**Other Precautions:** None.

The above information is believed to be correct, but does not purport to be all inclusive and shall be used only as a guide. ESPI shall not be held liable for any damage resulting from handling or from contact with the above product.

Prepared by: S. Dierks  
Revised: January 1996