

Material Safety Data Sheet

Identity: Aluminum

Formula: Al

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

Molecular weight: 26.98

CAS #	OSHA PEL	ACGIH TLV	%
7429-90-5	15mg/m ³	10mg/ m ³	0-100

SECTION III – PHYSICAL/CHEMICAL CHARACTERISTICS

Physical States: Solid

Boiling Point: 2467.00 °C

Melting Point: 660.4 °C

Evaporation Rate: N/A

Solubility in water: Insoluble

Vapor Pressure (vs. air or mmHg):

Density: 2.70 g/cm³

Flash Point: N/A

Specific Gravity(H₂O=1): 2.702*Appearance and odor:* Silver-white, metallic powder and pieces with no odor

SECTION IV - FIRE AND EXPLOSION HAZARD DATA:

Method Used: Flammable solid *Explosive Limits:* LEL: N/A UEL: N/A *Auto Ignition:* 760.0 °C*Extinguishing Media:* Use class D or other extinguishing agent for metal fires.*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: Powders may react violently with hydrochloric acid, halogens, interhalogens, chloroform, chlorometane, and will spontaneously ignite with CS₂ vapors.

SECTION V - REACTIVITY DATA

Stability: Stable

Conditions to Avoid (stability): None

Incompatibility: Water, oxidizing agents, acid, acid chlorates, harsh alkalis and halogenated compounds.

Hazardous Decomposition or Byproducts: Hydrogen gas

Hazardous Polymerization: Will not occur

Conditions to avoid (hazardous polymerization): None

SECTION VI - HEALTH HAZARD DATA

Routes of entry: Inhalation? Yes Skin? No Eyes? No Ingestion? No Other? No

Health Hazards (Acute and Chronic):

Aluminum compounds have many commercial uses and are commonly found in industry. Many of these materials are active chemically and thus exhibit dangerous toxic and reactive properties.

Inhalation:

Acute: Inhalation of dust or powder may cause an irritation to respiratory system.

Chronic: Inhalation of finely divided powder may cause pulmonary fibrosis.

Ingestion: No acute or chronic health effects recorded.

Skin: No acute or chronic health effects recorded

Eye: No acute or chronic health effects recorded

Target Organs:

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

Medical Conditions Aggravated by Exposure: Pre-existing respiratory disorders

Emergency and First Aid Procedures:

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

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

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

Eye: Flush eyes with lukewarm water, lifting upper and lower eyelids for at least 15 minutes and seek medical attention

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. 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.

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

Ventilation:

Local Exhaust: To maintain concentration at low exposure levels.

Mechanical (General): Recommended.

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