

## Material Safety Data Sheet

Identity: Sodium Aluminum Fluoride

Formula: Na<sub>5</sub>Al<sub>3</sub>F<sub>14</sub>

Chemical Family: Metal Halide

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### 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.

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### SECTION II - PRODUCT INFORMATION/HAZARDOUS INGREDIENTS

CAS #	%	OSHA/PEL	ACGIH/TLV	Other Limits
1302-84-7	100	2.5mg(F)/m <sup>3</sup>	2.5mg(F)/m <sup>3</sup>	N/E

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### SECTION III - PHYSICAL/ CHEMICAL CHARACTERISTICS

Boiling Point: N/E or N/A

Melting Point: N/E or N/A

% Volatile: N/E or N/A

Solubility in Water: N/E

Specific Gravity: N/E

Evaporation Rate: N/E

Vapor Density: N/A

Vapor Pressure: N/A

Appearance and Odor: Powder and pieces, no odor.

Physical State: Solid

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### SECTION IV - FIRE AND EXPLOSION DATA

Flash Point: NAExtinguishing Media: Not Applicable. Use suitable extinguishing media for surrounding materials and type of fire.Special Fire Fighting Procedures: Fire fighters 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, Sodium Aluminum Fluoride may emit toxic fumes.

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## SECTION V - REACTIVITY DATA

Stability: Stable

Conditions to Avoid - Instability: None

Incompatibility - Materials to avoid: Strong acids.

Hazardous Polymerization: Will not occur.

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## SECTION VI - HEALTH HAZARD DATA

Routes of Exposure:

Inhalation:

Acute: May cause irritation to respiratory tract and mucous membrane. Dusts may cause asthma attacks and lung damage such as lung granulomas and pulmonary edema. Large doses may cause immediate defecation, writhing, loss of muscle coordination, labored respiration, sedation, hypotension, dyspnea, pulmonary fibrosise hyperemia, liver edema and necrosis, portal congestion, pleural effusion and granulatous peritonitis with serious and hemorrhagic ascites, respiratory and cardiac failure.

Chronic: May cause fluorosis, pulmonary fibrosis, severe bone changes, hyperemia, cellular eosinophilia, and vascular granulomata, acute chemical pneumonitis, subacute bronchitis and focal hypertopic emphysema.

Symptoms: Fibrosis may cause: Sclerosis of the bones, calcification of ligaments, mottled teeth, osteosclerosis, ostemalacia, loss of weight, anorexia, anemia, wasting, cachia and dental defects.

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

Ingestion:

Acute: May cause gastrointestinal irritation.

Chronic: May affect renal and hepatic functions, circulatory, enzyme and nervous system.

Symptoms: May cause nausea, vomiting, diarrhea, abdominal distress, stupor, weakness, tremors, convulsions, collapse, dyspnea, respiratory and cardiac failure.

Emergency: Give 1 – 2 glasses of water or milk and induce vomiting; seek medical attention.

Never induce vomiting or give anything by mouth to an unconscious person.

Skin: Acute: May cause irritation.

Chronic: May cause dermatitis and skin lesions.

Symptoms: May cause redness, itching, inflammation and burning.

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

Eye: Acute: May cause irritation.

Chronic: No chronic health effects recorded.

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

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

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## 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 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 and Storing: none

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## SECTION VIII – CONTROL MEASURES

### Protective Equipment Summary - Hazard Label Information

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

### Respiratory Protection (Specify Type):

Ventilation:

Local Exhaust: Local exhaust ventilation may be necessary to control any air contaminants to within their PEL or TLVs during the use of this product. Special: None

Mechanical (GEN): Good general ventilation is recommended.

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.