

MATERIAL SAFETY DATA SHEET

I. PRODUCT IDENTIFICATION

Manufacturer/Supplier:

Stanford Advanced Materials
23661 Birtcher Dr., Lake Forest, CA 92630
Tell +1 (949) 407-8904 Fax +1 (949) 812-6690

Product Name: Sodium Aluminum Fluoride

Formula: Na₃AlF₆

CAS Number: 13775-53-6

II. HAZARDOUS INGREDIENTS

Hazardous Components: Sodium Aluminum Fluoride

Percent (%): 0-100

OSHA/PEL: 2.5 (F) mg/m³

ACGIH/TLV: 2.5 (F) mg/m³

HMIS Ratings:

Health: 2

Flammability: 0

Reactivity: 1

III. PHYSICAL DATA

Boiling Point: N/E

Melting Point: 1000 °C

Specific Gravity: 2.9 g/cc

Solubility in H₂O: Insoluble

Appearance and Odor: White crystalline powder, no odor.

IV. FIRE AND EXPLOSION HAZARDS DATA

Flash Point: N/A

Autoignition Temperature: N/E

Flammable Limits: Lower: N/E Upper: N/E

Extinguishing Media: Use suitable extinguishing agent 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.

Unusual Fire & Explosion Hazards: May emit toxic fumes of hydrogen fluoride.

V. HEALTH HAZARD INFORMATION

Effects of Exposure:

To the best of our knowledge the chemical, physical and toxicological properties of sodium aluminum fluoride have not been thoroughly investigated and reported.

Sodium rapidly forms caustic and highly corrosive sodium hydroxide with evolution of heat. Severe thermal and chemical burns will result at every point of human contact.

Aluminum may be implicated in Alzheimer's disease. Inhalation of aluminum containing dusts may cause pulmonary disease.

Fluorides may cause salivation, nausea, vomiting, diarrhea and abdominal pain, followed by weakness, tremors, shallow respiration, convulsions and coma. May cause brain and kidney damage. Chronic fluoride poisoning can cause severe bone changes, loss of weight, anorexia, anemia and dental defects.

Acute Effects:

Inhalation: Inhalation of dust may cause severe irritation of the nasal cavity and respiratory tract, pulmonary edema, congestion and fluorosis (bone damage).

Ingestion: Swallowing will lead to a strong corrosive effect on mouth and throat and to the danger of perforation of esophagus and stomach.

Skin: Corrosive effect on skin and mucous membranes.

Eye: Strong corrosive effect.

Chronic Effects: A very large dose or prolonged exposure may cause fluorosis (bone damage), and kidney or liver damage

Target Organs: Eyes, skin, kidney, liver, lung, bone.

EMERGENCY AND FIRST AID PROCEDURES:

INHALATION: Remove to fresh air. If required, provide artificial respiration. Keep patient warm. Seek immediate medical advice.

INGESTION: Seek immediate medical advice.

SKIN: Immediately wash with water and soap and rinse thoroughly. Seek immediate medical advice.

EYE: Immediately flush with plenty of water for at least 15 minutes. Seek medical attention.

VI. REACTIVITY DATA

Stability: Stable

Conditions to Avoid: Reacts with strong alkali

Incompatibility (Material to avoid): Bases

Hazardous Decomposition Products: Hydrogen fluoride

Hazardous Polymerization: Will not occur.

VII. SPILL OR LEAK PROCEDURES

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. Use

neutralizing agent. Sweep or scoop up and place sealed container for disposal. Take care not to raise dust.

Waste Disposal Method: Dispose of in accordance with Federal, State and Local regulations.

VIII. SPECIAL PROTECTION INFORMATION

Respiratory Protection: NIOSH approved dust-fume-mist cartridge respirator when high concentrations are present.

Ventilation: Use local exhaust to maintain concentration of exposure below PEL, TLV. Use adequate ventilation.

Protective Gloves: Impervious gloves.

Eye Protection: Safety glasses, tightly sealed goggles, full face protection.

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

IX. SPECIAL PRECAUTIONS

Precautions to Be Taken in Handling and Storage: Do not get in eyes, on skin or on clothing. Avoid breathing dust. Do not taste or swallow. Use only with adequate ventilation. Keep container closed. Wash thoroughly after handling. This material is not hazardous under normal storage conditions, however, material should be stored in closed containers, in a secure area to prevent container damage and subsequent spillage.

Work Practices: Implement engineering and work practice controls to reduce and maintain concentration of exposure. 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. Maintain eyewash capable of sustained flushing, safety drench shower and facilities for washing.

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