



LTS Research Laboratories, Inc.
Safety Data Sheet
Ammonium fluoride

1. Product and Company Identification

Trade Name: Ammonium fluoride
Chemical Formula: NH₄F
Recommended Use: Scientific research and development

Manufacturer/Supplier: LTS Research Laboratories, Inc.
Street: 37 Ramland Road
City: Orangeburg
State: New York
Zip Code: 10962
Country: USA
Tel #: 855-587-2436 / 855-lts-chem

24-Hour Emergency Contact: 800-424-9300 (US & Canada)
+1-703-527-3887 (International)

2. Hazards Identification

Signal Word: Danger



Hazard Statements: H301+H311+H331: Toxic if swallowed, in contact with skin or if inhaled.

Precautionary Statements: P261: Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P264: Wash face, hands and any exposed skin thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P271: Use only outdoors or in a well-ventilated area.
P280: Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301+P310+P330: IF SWALLOWED: Immediately call a POISON CENTER/doctor. Rinse mouth.
P302+P352+P312: IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or doctor/ physician if you feel unwell.
P304+P340+P311: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor.
P305+P351+P338+P310: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
P361: Remove/Take off immediately all contaminated clothing
P363: Wash contaminated clothing before reuse
P362: Take off contaminated clothing and wash before reuse.
P403+P233: Store in a well-ventilated place. Keep container tightly closed.
P405: Store locked up.
P501: Dispose of contents/ container to an approved waste disposal plant.

HMIS Health Ratings (0-4):

Health: 3
Flammability: 0
Physical: 1

3. Composition

Chemical Family: Inorganic compound
Additional Names: None

Ammonium fluoride (NH₄F):
Percentage: 100 wt%
CAS #: 12125-01-8
EC #: 235-185-9

4. First Aid Procedures

General Treatment: Seek medical attention if symptoms persist.
Special Treatment: Hydrofluoric (HF) acid burns require immediate and specialized first aid and medical treatment. Symptoms may be delayed up to 24 hours depending on the concentration of HF. After decontamination with water, further damage can occur due to penetration/absorption of the fluoride ion. Treatment should be directed toward binding the fluoride ion as well as the effects of exposure. Skin exposures can be treated with a 2.5% calcium gluconate gel repeated until burning ceases. More serious skin exposures may require subcutaneous calcium gluconate except for digital areas unless the physician is experienced in this technique, due to the potential for tissue injury from increased pressure. Absorption can readily occur through the subungual areas and should be considered when undergoing decontamination. Prevention of absorption of the fluoride ion in cases of ingestion can be obtained by giving milk, chewable calcium carbonate tablets or Milk of Magnesia to conscious victims. Conditions such as hypocalcemia, hypomagnesemia and cardiac arrhythmias should be monitored for, since they can occur after exposure.

Important Symptoms: None

Inhalation: Remove victim to fresh air. Supply oxygen if breathing is difficult. Keep patient warm. Seek immediate medical attention.

Ingestion: Seek immediate medical attention.

Skin: Immediately wash affected area with mild soap and water. Remove any contaminated clothing. Seek immediate medical attention.

Eyes: Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek immediate medical attention.

5. Firefighting Measures

Flammability: Non-flammable, except as powder

Extinguishing Media: No special restrictions – use suitable extinguishing agent for surrounding material and type of fire.

Spec. Fire Fighting Procedure: Use full-face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. See section 10 for decomposition products.

6. Accidental Release Measures

If Material Is Released/Spilled:	Wear appropriate respiratory and protective equipment specified in special protection information. Keep unprotected persons away. 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 disposal. Take care not to raise dust.
Environmental Precautions:	Isolate runoff to prevent environmental pollution.

7. Handling and Storage

Handling Conditions:	Handle under dry protective gas. Avoid contact with the eyes and skin. Wash thoroughly after handling.
Storage Conditions:	Store in a cool dry place in a tightly sealed container. Store under dry inert gas. Store away from water/moisture, oxidizing agents. This product is hygroscopic. Do not store in glass. Protect from humidity and water. Store apart from materials and conditions listed in section 10.
Work/Hygienic Maintenance:	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.
Ventilation:	Provide sufficient ventilation to maintain concentration at or below threshold limit.

8. Exposure Controls and Personal Protection

Permissible Exposure Limits:	2.5 mg/m ³ as F, long-term value
Threshold Limit Value:	2.5 mg/m ³ as F, long-term value
Special Equipment:	Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.
Respiratory Protection:	Dust Respirator
Protective Gloves:	Nitrile rubber gloves with minimum thickness of 0.11 mm
Eye Protection:	Safety glasses or goggles
Body Protection:	Protective work clothing. Wear close-toed shoes and long sleeves/pants.

9. Physical and Chemical Characteristics

Color	White
Form:	Powder, Granules, Pellets, Sputtering target, Custom parts
Odor:	Odorless
Water Solubility:	820 g/L - soluble
Boiling Point:	N/A
Melting Point:	100 °C (decomposes before melting)
Flash Point:	N/A
Autoignition Temperature:	N/A
Density:	1.01 g/cc
Molecular weight:	37.04 g/mol

10. Reactivity

Stability:	Stable under recommended storage conditions
Reacts With:	Reacts dangerously with glass. Oxidizing agents, Water/Moisture, Acids, Bases
Incompatible Conditions:	Water/moisture, Heat
Hazardous Decomposition Products:	Metal oxide fume, hydrogen fluoride, nitrogen oxides, ammonia

11. Toxicological Information

Potential Health Effects:

Eyes: Causes serious eye damage
Skin: Toxic in contact with skin. Danger through skin absorption.
Ingestion: Toxic if swallowed
Inhalation: Toxic if inhaled
Chronic: Fluoride ion can reduce serum calcium levels possibly causing fatal hypocalcemia.

Signs & Symptoms: Salivation, nausea, vomiting, fever. Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.

Aggravated Medical Conditions: N/A

Median Lethal Dose: 200 mg/kg for rat by mouth

Carcinogen: IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

12. Ecological Information

Aquatic Toxicity: N/A
Persistent Bioaccumulation Toxicity: N/A
Very Persistent, Very Bioaccumulative: N/A
Notes: Do not allow material to be released to the environment without proper governmental permits.
Do not undiluted product or large quantities to reach ground water, water course or sewage system.
Avoid contact into the environment.

13. Disposal Considerations

Dispose of in accordance with local, state, national, and international regulations.

14. Transportation Data

Hazardous: Hazardous as powder only.



Hazard Class: 6.1 Toxic substances
Packing Group: III
UN Number: UN2505
Proper Shipping Name: Ammonium fluoride

15. Regulatory Information

Sec 302 Extremely Hazardous:	No
Sec 304 Reportable Quantities:	N/A
Sec 313 Toxic Chemicals:	No

16. Other Information

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.

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