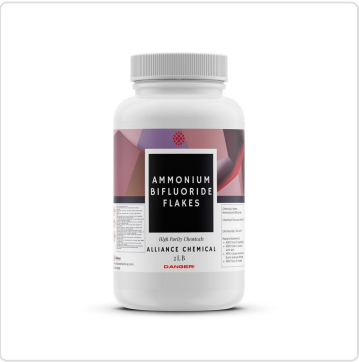
TECHNICAL DATA SHEET

Ammonium Bifluoride Flakes

Revised: 04/27/2026

PRODUCT IDENTIFICATION



Product Name: Ammonium Bifluoride Flakes
CAS Number: 1341-49-7
Molecular Formula: F_2H_5N
Molecular Weight: 57.044 g/mol
Grade: Technical Grade
Purity / Concentration: Not Available
Synonyms: Ammonium Hydrogen Fluoride, Ammonium Fluoride

PRODUCT OVERVIEW

Ammonium Bifluoride Flakes (CAS 1341-49-7) is a high-purity Technical Grade chemical characterized by a 97.5% assay and minimal impurity levels, such as 5 ppm of iron. These white crystalline flakes serve as a versatile fluoride source widely utilized in industrial etching, cleaning, and chemical synthesis applications.

Grade Significance: Technical Grade indicates that this product is manufactured to provide a balance of high purity and cost-effectiveness, making it ideal for industrial processes where precise chemical performance is required.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (wt%)	%	97.5	95	—	Titration with NaOH
Color (APHA)	APHA	10	—	20	Visual Comparison
Residue After Ignition	%	0.01	—	0.1	Gravimetric
Water Content	%	0.2	—	0.5	Karl Fischer Titration
Heavy Metals (as Pb)	ppm	ND	—	10	ICP-OES
Iron (Fe)	ppm	5	—	10	ICP-OES
Chloride (Cl^-)	ppm	15	—	50	Ion Chromatography
Sulfate (SO_4^{2-})	ppm	10	—	50	Turbidimetry

ND = Not Detected. Values are typical and may vary by lot.

PHYSICAL & CHEMICAL PROPERTIES

Appearance	White crystalline flakes	**Odor**	Slightly pungent
Form	Solid	**Boiling Point**	240°C (464°F)
Melting / Freezing Point	125°C (257°F)	**Specific Gravity**	1.5
Solubility	Highly soluble in water	**Molecular Formula**	F_2H_5N
Molecular Weight	57.044 g/mol	**Density (25°C)**	1.25 g/mL

APPLICATIONS

1. **Semiconductor Manufacturing** — Used as a critical etching agent for silicon wafers to ensure precision in microchip fabrication.
2. **Industrial Cleaning** — Effectively removes stubborn oxides from glass and metal surfaces, restoring clarity and structural integrity.
3. **Chemical Synthesis** — Functions as a reliable fluoride source for the production of various specialized fluorinated compounds.
4. **Water Treatment** — Utilized for precise pH adjustment in industrial water systems to maintain chemical balance.

STORAGE & HANDLING

Ammonium Bifluoride must be stored in a cool, dry, and well-ventilated area to prevent moisture absorption and degradation. Because this material is toxic if swallowed and causes severe skin burns, it must be kept in tightly sealed, corrosion-resistant containers to prevent accidental exposure.

- Store in a cool, dry place away from moisture.
- Use appropriate personal protective equipment (PPE) such as gloves and goggles.
- Avoid contact with strong acids and bases to prevent hazardous reactions.
- Ensure proper ventilation in storage areas to minimize inhalation risks.
- Compatible with HDPE and glass containers; avoid metal containers.

AVAILABLE PACKAGING

- 2 lbs.
- 5 Lbs.
- 44 Lbs.

SAFETY SUMMARY (CROSS-REFERENCE TO SDS)

Signal Word: Danger

Hazard Statements:

- H301: Toxic if swallowed [Danger Acute toxicity, oral]
- H314: Causes severe skin burns and eye damage [Danger Skin corrosion/irritation]

Emergency Contact: CHEMTEL - 800-255-3924 (24 Hours/Day, 7 Days/Week)

For complete safety information, refer to the Safety Data Sheet (SDS) for this product.

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