



**Precautionary Statements - Response**

Immediately call a poison center or doctor/physician

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 or doctor/physician

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

Wash contaminated clothing before reuse Immediately call a POISON CENTER/Doctor.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Immediately call a poison center or doctor/physician

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/Doctor

**Precautionary Statements - Storage**

Store locked up. Store in original tightly closed container. Store away from incompatible materials. (see Section 10 of the SDS)

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Ammonium bifluoride	1341-49-7	98

\*\*If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.\*\*

### 4. FIRST-AID MEASURES

**First Aid Measures**

<b>General Advice</b>	Provide this SDS to medical personnel for treatment.
<b>Eye Contact</b>	IF IN EYES: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.
<b>Skin Contact</b>	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a poison center or doctor/physician. Wash contaminated clothing before reuse. Chemical burns must be treated by a physician.
<b>Inhalation</b>	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.
<b>Ingestion</b>	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. If vomiting occurs keep head low so that stomach content doesn't get into the lungs. Call a POISON CONTROL CENTER or doctor immediately.

**Most important symptoms and effects**

<b>Symptoms</b>	Burning pain and severe corrosive skin damager. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling and blurred vision. Permanent eye damage including blindness could result.
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**Indication of any immediate medical attention and special treatment needed****Notes to Physician**

Because of the likelihood of corrosive effects and the unlikelihood of systemic effects, attempts of evacuating the stomach via emesis induction or gastric lavage should be avoided.

**5. FIRE-FIGHTING MEASURES****Suitable Extinguishing Media**

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2)

**Unsuitable Extinguishing Media** Not determined.

**Specific Hazards Arising from the Chemical**

Do not use water jet as an extinguisher as this will spread the fire.

**Hazardous Combustion Products** During fire, gases hazardous to health may be formed.

**Protective equipment and precautions for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**6. ACCIDENTAL RELEASE MEASURES****Personal precautions, protective equipment and emergency procedures****Personal Precautions**

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained.

**Environmental Precautions**

See Section 12 for additional Ecological Information.

**Methods and material for containment and cleaning up****Methods for Containment**

Prevent further leakage or spillage if safe to do so.

**Methods for Clean-Up**

Large spills: Stop the flow of material if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, wash spill area with plenty of water.

Small spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Comply with Federal, State and Local regulations on reporting of releases of wastes.

Environmental precautions: Avoid discharge into drains, water courses or onto the ground.

**7. HANDLING AND STORAGE****Precautions for safe handling**

**Advice on Safe Handling** Handle in accordance with good industrial hygiene and safety practice. Provide adequate ventilation. Wash face, hands, and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Do not breathe dust/fume/gas/mist/vapors/spray. Wear protective gloves/protective clothing and eye/face protection

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Store locked up. Store in original tightly closed container. Store away from incompatible materials.

**Incompatible Materials** Strong oxidizing agents.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Exposure Guidelines**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ammonium bifluoride 1341-49-7	TWA: 2.5 mg/m <sup>3</sup> F	TWA: 2.5 mg/m <sup>3</sup> F TWA: 2.5 mg/m <sup>3</sup> dust (vacated) TWA: 2.5 mg/m <sup>3</sup>	TWA: 2.5 mg/m <sup>3</sup> F

**Appropriate engineering controls**

**Engineering Controls** Apply technical measures to comply with the occupational exposure limits. Showers. Eyewash stations. Ventilation systems.

**Individual protection measures, such as personal protective equipment**

**Eye/Face Protection** Wear chemical splash goggles and face shield.

**Skin and Body Protection** Wear appropriate chemical resistant gloves, clothing.

**Respiratory Protection** For severe vapor or mist use NIOSH certified self-contained breathing apparatus.

**General Hygiene Considerations** Handle in accordance with good industrial hygiene and safety practice.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Information on basic physical and chemical properties**

<b>Physical State</b>	Solid	<b>Odor</b>	Odorless
<b>Appearance</b>	White Crystal	<b>Odor Threshold</b>	Not determined
<b>Color</b>	White		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	Not determined	
Melting Point/Freezing Point	125.6 °C / 258.08 °F	
Boiling Point/Boiling Range	237.2 °C / 212 °F	
Flash Point	Not determined	
Evaporation Rate	Not determined	(butyl acetate = 1)
Flammability (Solid, Gas)	Not determined	
Upper Flammability Limits	Not determined	
Lower Flammability Limit	Not determined	
Vapor Pressure	Not determined	@ 20°C (68°F)
Vapor Density	1.00	(Air=1)
Specific Gravity	0.12	(Water = 1)
Water Solubility	Soluble in water	
Solubility in other solvents	Not determined	

<b>Partition Coefficient</b>	Not determined
<b>Auto-ignition Temperature</b>	Not determined
<b>Decomposition Temperature</b>	Not determined
<b>Kinematic Viscosity</b>	Not determined
<b>Dynamic Viscosity</b>	Not determined
<b>Explosive Properties</b>	Not explosive
<b>Oxidizing Properties</b>	Not oxidizing

## 10. STABILITY AND REACTIVITY

### Reactivity

Not reactive under normal conditions.

### Chemical Stability

Material is stable under normal conditions.

### Possibility of Hazardous Reactions

None under normal processing.

**Hazardous Polymerization**      Hazardous polymerization does not occur.

### Conditions to Avoid

Keep out of reach of children.

### Incompatible Materials

Strong oxidizing agents.

### Hazardous Decomposition Products

No hazardous decomposition products are known.

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

#### Product Information

**Eye Contact**      Causes severe eye damage.

**Skin Contact**      Causes severe skin burns.

**Inhalation**      Do not inhale.

**Ingestion**      Harmful if swallowed.

### Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Ammonium bifluoride 1341-49-7	= 130 mg/kg ( Rat )	-	-

### Information on physical, chemical and toxicological effects

**Symptoms**      Burning pain and severe corrosive skin damager. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling and blurred vision. Permanent eye damage including blindness could result.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure****Carcinogenicity**

The table below indicates whether each agency has listed any ingredient as a carcinogen. However, the product as a whole has not been tested.

Chemical Name	ACGIH	IARC	NTP	OSHA
Ammonium bifluoride 1341-49-7		Group 3		

**Legend**

**ACGIH (American Conference of Governmental Industrial Hygienists)**

A3 - Animal Carcinogen

**IARC (International Agency for Research on Cancer)**

Group 3 IARC components are "not classifiable as human carcinogens"

**Numerical measures of toxicity**

Not determined

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

This product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

**Persistence/Degradability**

Not determined.

**Bioaccumulation**

Not determined.

**Mobility**

Not determined.

**Other Adverse Effects**

Not determined

## 13. DISPOSAL CONSIDERATIONS

**Waste Treatment Methods****Disposal of Wastes**

Disposal should be in accordance with applicable regional, national and local laws and regulations. Collect and reclaim or dispose in sealed containers at a licensed waste disposal site. Since empty containers may retain product residue, follow label warning even after container is emptied.

**Contaminated Packaging**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

## 14. TRANSPORT INFORMATION

**Note**

Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

**DOT**

**UN/ID No** UN1727  
**Proper Shipping Name** Ammonium Hydrhendifluoride Solid  
**Hazard Class** 8  
**Packing Group** II

**IATA**

**UN/ID No** UN1727  
**Proper Shipping Name** Ammonium Hydrhendifluoride Solid  
**Hazard Class** 8  
**Packing Group** II

**IMDG**

**UN/ID No** UN1727  
**Proper Shipping Name** Ammonium Hydrhendifluoride Solid  
**Hazard Class** 8  
**Packing group** II

## 15. REGULATORY INFORMATION

**International Inventories**

Chemical Name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Ammonium bifluoride	Present	X		Present		Present	X	Present	X	X

**Legend:**

*TSCA - United States Toxic Substances Control Act Section 8(b) Inventory*

*DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List*

*EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances*

*ENCS - Japan Existing and New Chemical Substances*

*IECSC - China Inventory of Existing Chemical Substances*

*KECL - Korean Existing and Evaluated Chemical Substances*

*PICCS - Philippines Inventory of Chemicals and Chemical Substances*

*AICS - Australian Inventory of Chemical Substances*

**US Federal Regulations****CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Ammonium bifluoride 1341-49-7	100 lb		RQ 100 lb final RQ RQ 45.4 kg final RQ

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
Ammonium bifluoride - 1341-49-7	1341-49-7	26.3	1.0

**CWA (Clean Water Act)**

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Ammonium bifluoride	100 lb			X

**US State Regulations****California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Ammonium bifluoride 1341-49-7	X	X	X

<b>16. OTHER INFORMATION</b>
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**NFPA****Health Hazards**

3

**Flammability**

0

**Instability**

0

**Special Hazards****HMIS****Health Hazards**

Not determined

**Flammability**

Not determined

**Physical Hazards**

Not determined

**Personal Protection**

Not determined

**Issue Date:** 01-Jan-2013

**Revision Date:** 18-Apr-2016

**Revision Note:** New format

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**