Ammonium Bifluoride

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: Ammonium Bifluoride
Synonyms: Ammonium hydrogen difluoride
SDS Number: R-026
Product Code: 518102-1, 518102-5, 518102-10, 518102-50
Revision Date: 11/9/2015
Version: 1.0
CAS Number: 1341-49-7
Supplier Details: High Valley Products, Inc.
1134 West 850 North
Centerville, Utah 84014
Emergency: PERS: 800-633-8253
Phone: 801-295-9591
Email: sales@hvchemical.com
Web: www.hvchemical.com

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS):
- Health, Acute toxicity, 3 Oral
- Health, Skin corrosion/irritation, 1 B
- Health, Serious Eye Damage/Eye Irritation, 1

GHS Label elements, including precautionary statements

GHS Signal Word: DANGER

GHS Hazard Pictograms:

- Flammable
- Corrosive

GHS Hazard Statements:
- H301 - Toxic if swallowed
- H314 - Causes severe skin burns and eye damage
- H318 - Causes serious eye damage

GHS Precautionary Statements:
- P260 - Do not breathe dust/fume/gas/mist/vapors/spray.
- P264 - Wash skin thoroughly after handling.
- P270 - Do not eat, drink or smoke when using this product.
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- P301+330+331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P303+361+353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304+341 - IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P305+351+338 - IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
- P310 - Immediately call a POISON CENTER or doctor/physician.
- P363 - Wash contaminated clothing before reuse.
- P405 - Store locked up.


### COMPOSITION/INFORMATION ON INGREDIENTS

**Ingredients:**

<table>
<thead>
<tr>
<th>Cas#</th>
<th>%</th>
<th>Chemical Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1341-49-7</td>
<td>100%</td>
<td>Ammonium bifluoride</td>
</tr>
</tbody>
</table>

### FIRST AID MEASURES

**Inhalation:** If inhaled, move person to fresh air. If not breathing, give artificial respiration. Consult a physician.

**Skin Contact:** Remove contaminated clothing and wash before reuse. Wash with soap and water. Consult a physician.

**Eye Contact:** Immediately flush eyes with large amounts of water for at least 15 minutes, lifting eyelids occasionally to facilitate irrigation.

**Ingestion:** Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

### FIRE FIGHTING MEASURES

**Extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Special hazards arising from the substance or mixture**

Nitrogen oxides (NOx), Hydrogen fluoride

**Advice for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

**Further information**

No data

### ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures:**

Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

**Environmental precautions:**

Do not let product enter drains.

**Methods and materials for containment and cleaning up:**

Arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

### HANDLING AND STORAGE

**Handling Precautions:** Processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Avoid contact with skin and eyes. Avoid formation of dust.

**Storage Requirements:** Keep container tightly closed. Store in cool/dry well ventilated area.
Personal Protective Equipment:

Ammonium bifluoride (1341-49-7) [100%]

Personal protective equipment

Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching gloves outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. Full contact Material: Nitrile rubber Minimum layer thickness: 0.11 mm Break through time: 480 min Material tested:Dermatril (KCL 740 / Aldrich Z677272, Size M) Splash contact data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374 If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Eye protection: Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection: Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures: Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Ammonium bifluoride (1341-49-7) [100%]

Components with workplace control parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Source</th>
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<tbody>
<tr>
<td>TWA</td>
<td>2.5 mg/m³</td>
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<tr>
<td>Bone damage Fluorosis Substances for which there is a Biological Exposure Index or Indices (see BEI section) Not classifiable as a human carcinogen varies</td>
<td></td>
<td></td>
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PHYSICAL AND CHEMICAL PROPERTIES

Appearance: White crystalline
Physical State: Solid
Odor: No data available
Odor Threshold: No data available
Solubility: No data available
Spec Grav./Density: 1.5
Viscosity: No data available
Boiling Point: No data available
Freezing/Melting Pt.: Melting point/range: 125 °C (257 °F) - lit.
Flash Point: No data available
Partition Coefficient: No data available
Vapor Pressure: No data available
Vapor Density: No data available
pH: No data available
Evap. Rate: No data available
Auto-Ignition Temp: No data available
Decomp Temp: No data available
UFL/LFL: No data available

STABILITY AND REACTIVITY

Reactivity: No data available
Chemical Stability: Stable under recommended storage conditions.
Conditions to Avoid: Moisture.
Materials to Avoid: Strong Oxidizing Agents.
Hazardous Decomposition: No data available

TOXICOLOGICAL INFORMATION

Ammonium bifluoride (1341-49-7) [100%]

Information on toxicological effects

Acute toxicity:
Oral LD50 no data available
Inhalation LC50
Dermal LD50
Other information on acute toxicity

Skin corrosion/irritation: no data available
Serious eye damage/eye irritation: no data available
Respiratory or skin sensitisation: no data available
Germ cell mutagenicity: no data available

Carcinogenicity:
IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Ammonium bifluoride)
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.

Reproductive toxicity: no data available
Teratogenicity: no data available

Specific target organ toxicity - single exposure (Globally Harmonized System):
no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System):
Aspiration hazard: no data available

Potential health effects: Inhalation May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. Ingestion Toxic if swallowed. Skin May be harmful if absorbed through skin. Causes skin burns. Eyes Causes eye burns.

Signs and Symptoms of Exposure: Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache, Nausea

Synergistic effects: no data available

Additional Information:

RTECS: BQ9200000

12 ECOLOGICAL INFORMATION

Ammonium bifluoride (1341-49-7) [100%]

Information on ecological effects

Toxicity: no data available

Persistence and degradability: no data available

Bioaccumulative potential: no data available

Mobility in soil: no data available

PBT and vPvB assessment: no data available

Other adverse effects: no data available

13 DISPOSAL CONSIDERATIONS

Ammonium bifluoride (1341-49-7) [100%]

Waste treatment methods

Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging: Dispose of as unused product.

14 TRANSPORT INFORMATION

UN1727, Ammonium hydrogendifluoride, solid, 8, PGII

15 REGULATORY INFORMATION

Component (CAS#) [%] - CODES

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RQ(100LBS), Ammonium bifluoride (1341-49-7) [100%] CERCLA, CSWHS, MASS, PA, TSCA

Regulatory CODE Descriptions
----------------------------------------------------------------
RQ = Reportable Quantity
CERCLA = Superfund clean up substance
CSWHS = Clean Water Act Hazardous substances
MASS = MA Massachusetts Hazardous Substances List
PA = PA Right-To-Know List of Hazardous Substances
TSCA = Toxic Substances Control Act

16 OTHER INFORMATION

NFPA: Health = 3, Fire = 0, Reactivity = 0, Specific Hazard = n/a
HMIS III: Health = 3, Fire = 0, Physical Hazard = 0

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