

**VAPCO PRODUCTS DIV.
GARMAN COMPANY
401 MARSHALL ROAD
VALLEY PARK, MO 63088**

Briten**HMIS: 3-0-0****NFPA: 3-0-0**

For Customer Service call: (636) 923-2121
Emergency Telephone: (800) 255-3924

Data Sheet: 11061
Prepared: 11/3/05

This Material Safety Data Sheet complies with OSHA Hazard Communication Standard 29 CFR 1910.1200.

SECTION 1: COMPOSITION / INFORMATION ON INGREDIENTS

If present, IARC, NTP, and OSHA Carcinogens, are identified with an asterisk (*) in this section.

<u>Ingredient(s)</u>	<u>Exposure Limits</u>	<u>Percent</u>	<u>Note</u>
Ammonium bifluoride CAS# 1341-49-7	OSHA PEL - 2.5 mg/M ³ (as F) ACGIH TLV - 2.5 mg/M ³ (as F)	20-50%	
Sulfamic acid CAS#: 5329-14-6	None established	20-50%	

SECTION 2: HAZARDS IDENTIFICATION

Permissible Exposure Limits: Not established for this product. See Section 1 for Component PELs and TLVs.

Effects of Acute Overexposure:

Eyes: Corrosive! Exposure to solid material, or solutions of this material in water, causes severe eye irritation and may result in permanent eye damage. Exposure to high concentrations of vapors formed when mixing with water or other materials can also cause irritation. Symptoms may include stinging, tearing, redness, swelling, pain and eye damage. Burning may not be immediately painful or visible.

Skin: Corrosive! Exposure to solid material, or solutions of this material in water, causes severe irritation and burns. Symptoms may be delayed and include redness, burning and severe skin damage. Prolonged or repeated exposure may allow fluorides to penetrate skin and attack underlying tissue and bone. Large burns have resulted in the removal of calcium from the bone.

Breathing: Exposure to vapor or dust can cause severe irritation to the respiratory tract. Symptoms include coughing, sore throat and rapid breathing. Prolonged or repeated contact may cause irreversible respiratory tract damage.

Swallowing: Exposure may be harmful or fatal. Fluoride containing dust may cause a salty or soapy taste, vomiting, pain, diarrhea, weakness, loss of consciousness, and death. Kidney damage and stomach bleeding may occur.

Primary Route(s) of Entry: Skin contact, skin absorption, eye contact, and inhalation.

Effects of Chronic Overexposure: This product does not contain components in excess of 0.1% which are listed as carcinogens by IARC, NTP, OSHA, or ACGIH.

Medical Conditions Aggravated by Exposure: Prolonged or repeated skin exposure to dust may cause excessive calcification of bone, ligament of ribs, pelvis, and spinal column. May aggravate other pre-existing disorders, such as diseases of the eyes, skin, respiratory tract, skeletal system, and kidneys.

SECTION 3: FIRST AID MEASURES

Note: First aid procedures should be pre-planned for fluoride containing-compounds

Eyes: Immediately remove individual from exposure area and into fresh air. Flush eyes with water for at least 30 minutes while holding eyelids apart. Seek immediate medical attention.

Skin: Remove contaminated clothing immediately. Discard contaminated shoes. Wash exposed area with large amounts of soap and water for at least 15 minutes. Apply bandages soaked in magnesium sulfate. Get medical attention as soon as possible.

Breathing: If affected, remove individual to fresh air. If breathing is difficult, administer oxygen (if you have been trained in its use). If breathing has stopped, give artificial respiration. Keep person warm, quiet and get immediate medical attention.

Swallowing: Do not induce vomiting. Vomiting will cause further damage to the throat. Get medical attention immediately. If individual is conscious and alert, immediately rinse mouth with water and dilute the swallowed material with milk of magnesia or water and chewable calcium carbonate tablets.

SECTION 4: FIRE FIGHTING MEASURES

Flash Point: >200 °F TCC

Explosive Limit: Not applicable

Extinguishing Media: Foam, CO₂, Dry Chemical, and Water.

Hazardous Decomposition Products: May form toxic materials including, but not limited to the following: hydrogen fluoride acid vapors and ammonia. May react with metal to release highly flammable hydrogen gas.

Fire Fighting Procedures: Keep personnel removed from and upwind. Wear full protective clothing and self-contained breathing apparatus with full face-piece.

Special Fire and Explosion Hazards: If this material comes into contact with water and certain metals at the same time, flammable hydrogen gas may be liberated. This material, when mixed with water becomes a strong acid solution.

SECTION 5: ACCIDENTAL RELEASE MEASURES

Small Spill: Wear appropriate protective equipment. Avoid generating dust. Sweep or scoop spilled material into a container (do NOT use glass) for reuse or disposal.

Large Spill: Only personnel trained in spill clean up under 29 CFR 1910.120 should be involved with spill clean-up procedures. Remove combustible materials and sources of heat or ignition. While avoiding the creation of dust, sweep or scoop spilled material into a container for disposal or reuse. Remaining material may be neutralized using dry lime. Do not flush to sewer. Follow Local, State, and Federal regulations for proper disposal.

EPA has designated ammonium bifluoride as a hazardous substance with a reportable quantity of 100 pounds. Spills of this material may require reporting to the National Response Center.

SECTION 6: HANDLING AND STORAGE

Storage: Keep in closed or covered containers when not in use. Store in cool dry place with adequate ventilation. Do not store near heat, open flames or combustible materials.

Handling: Never add water to this material; if making a solution, add this material to water. Avoid contact with skin, eyes and clothing. Avoid generating dust. Wash thoroughly after handling.

SECTION 7: EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection: Not required under normal conditions of use; however, if product is mixed with water, then sprayed or used in a confined area a NIOSH / MSHA approved respirator may be advised in absence of proper environmental control. OSHA regulations also permit other NIOSH / MSHA respirators under specified conditions—see 29 CFR 1910.134 or your safety equipment supplier. Engineering and/or administrative controls should be implemented to reduce exposure.

Protective Gloves: Wear chemical resistant gloves such as rubber. Contact your safety equipment supplier.

Eye Protection: Chemical splash goggles and a face shield, in compliance with OSHA regulations, are advised.

Other Protective Equipment: To prevent repeated or prolonged skin contact, wear protective clothing covering arms and legs.

Engineering Controls: Provide sufficient mechanical ventilation (general and/or local exhaust) to maintain exposure below recommended exposure limits. Material handling equipment should be designed to minimize the generation of dust.

SECTION 8: PHYSICAL AND CHEMICAL PROPERTIES

<u>Property</u>	<u>Measurement</u>	<u>Property</u>	<u>Measurement</u>
Boiling Point	Unavailable	Specific Gravity	Unavailable
Vapor Pressure	Negligible	Percent Volatiles	Less than 5%
Vapor Density	Unavailable	Evaporation Rate	Negligible
Solubility in Water	Soluble	Appearance	Pink solid
pH	3.5 (10% in water)		

SECTION 9: STABILITY AND REACTIVITY

Hazardous Polymerization: Can not occur

Stability: Stable under normal conditions

Incompatibility: Reacts violently with alkali materials, releasing ammonia. Forms hydrogen fluoride with concentrated acids. Evolves hydrogen gas upon contact with noble metals. Do not use glass containers. Avoid heat, moisture and incompatible materials.

SECTION 10: TOXICOLOGICAL INFORMATION

No data available for product at this time

SECTION 11: ECOLOGICAL INFORMATION

No data available for product at this time

SECTION 12: DISPOSAL CONSIDERATIONS

Dispose of in accordance with all Local, State, and Federal Regulations. This product may be classified as an RCRA Hazardous Waste D002 due to the pH of the solution and the corrosive characteristics.

SECTION 13: TRANSPORTATION INFORMATION

DOT Hazard Classification: Consumer Commodity, ORM-D

IMO/ICAO hazard Classification: Corrosive solid, acidic, inorganic, N.O.S. (contains sulfamic acid and sodium bifluoride), 8, UN 3260, PG II

SECTION 14: REGULATORY INFORMATION

SARA Title III, Section 313 chemicals: None

SARA 312 -- Health: Acute (Yes) Chronic (Yes) Fire (No) Reactivity (No)

Proposition 65: No

SECTION 15: OTHER INFORMATION

Containers used to transport and store this material may be hazardous when emptied. Residue (Vapor, Liquid, and/or Solid) may be present in the emptied container. All hazard precautionary measures should be followed.

The information accumulated and reflected in this Material Safety Data Sheet is believed to be accurate but is not warranted to be, whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.