

Section 1. Product and Company Identification

Product Name Ammonium Fluorosilicate
CAS Number 16919-19-0

Parchem - fine & specialty chemicals

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EMERGENCY RESPONSE NUMBER
CHEMTEL

Toll Free US & Canada: 1 (800) 255-3924

All other Origins: 1 (813) 248-0585

Collect Calls Accepted

Section 2. Hazards Identification

Classification of the substance or mixture

GHS Classification

Acute toxicity, Oral (Category 3), H301

Acute toxicity, Inhalation (Category 3), H331

Acute toxicity, Dermal (Category 3), H311

GHS Label Elements

Pictograms:



Signal word: DANGER

Hazard and precautionary statements

Hazard Statements

Acute Toxicity - Oral, Category 3- H301-Toxic if swallowed

Acute Toxicity - Inhalation, Category 3- H331. Toxic if inhaled

Acute Toxicity - Dermal, Category 3- H311-Toxic in contact with skin

Precautionary Statements

Prevention

P264 Wash thoroughly after handling

P270 Do not eat, drink, or smoke when using this product

P280 Wear protective gloves/protective clothing

P261 Avoid breathing dust

P271 Use only in a well-ventilated area.

Response

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER

P321 Specific treatment see section 4 First Aid
 P330 Rinse mouth
 P302 + P352 IF ON SKIN: Wash with plenty of water
 P312 Call POISON CENTER/Doctor if you feel unwell.
 P361 + P364 Take off immediately all contaminated clothing and wash it before reuse.
 P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing

Storage

P405 Store locked up
 P403 + P233 Store in well-ventilated place. Keep container tightly closed.

Disposal

P501 Dispose of content/container in accordance with local/regional/national regulations

Section 3. Composition / Information on Ingredients

Common Name Ammonium Fluorosilicate
Synonym(s) Ammonium Hexafluorosilicate; Ammonium Silicofluoride; Silicate (2-), Hexafluoro, Diammonium; Diammonium Hexafluorosilicate
Formula $(\text{NH}_4)_2\text{SiF}_6$
CAS Number 16919-19-0

COMPONENT	CAS NUMBER	CONCENTRATION
Ammonium Fluorosilicate	16919-19-0	>= 98.5%

Section 4. First Aid Measures

First-Aid Procedures

Eyes: Immediately flush with plenty of water for at least 15 minutes. Get prompt medical attention.

Skin: Immediately flush with plenty of water. Discard clothes if contaminated. Get medical attention if irritation occurs

Inhalation: Move to fresh air. Administer oxygen. Observe for delayed symptoms. Seek prompt medical attention

Ingestion: Do not induce vomiting. Give large quantities of milk or water if Patient is conscious. Seek prompt medical attention.

Most important symptoms and effects, both acute and delayed

In case of eye contact: Symptoms: Redness, pain.

Effects: Contact may cause severe irritation, eye burns and permanent eye damage.

In case of skin contact: Symptoms: Redness, pain.

Effects: Contact with skin may cause skin irritation (possibly severe), skin rashes and burns.

In case of Inhalation: Symptoms: Burning sensation. Coughing, Sore throat.

Effects: Inhalation of dust may cause respiratory irritation (possibly severe), coughing and damage to the nose, throat and respiratory tract.

In case of ingestion: Symptoms: Abdominal cramps, burning sensation. Nausea.

Effects: Toxic if swallowed.



Prolonged or repeated over exposure (Chronic) to fluoride compounds may cause dental or skeletal fluorosis.

Note to Physician: None

Section 5. Firefighting Measures

Suitable Extinguishing Media

Small fires: Water spray, foam, dry chemical, or carbon dioxide (CO₂)

Large fires: Water spray, fog, or foam.

Unsuitable Extinguishing Media: No restrictions

Flammable Properties

Flash Point: Not Applicable

OSHA Flammability Class: Not applicable

LEL/UEL: Not applicable

Auto-ignition Temperature: Not Applicable.

Protection of Firefighters

Wear self-contained breathing apparatus with full protective clothing.

Ammonium Fluorosilicate is not flammable, however when heated to decomposition, highly toxic and corrosive fumes of fluorides are emitted.

Section 6. Accidental Release Measures

Personal precautions, protective equipment, and emergency procedures.

Advice for nonemergency personnel: Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. For personal protection see Section 8.

Advice for emergency responders: Wear suitable protective clothing, gloves and eye/face protection. Use recommended respiratory protection. Contain and collect as any solid. Ventilate area.

Environmental Precautions: Prevent further leakage or spillage if safe to do so. Do not let product get into drains; do not flush into surface water or sanitary sewer system.

Response Techniques: Pick up material and arrange disposal without creating dust. Sweep up and shovel. Keep in properly labelled containers. Keep in suitable, closed containers for disposal. Treat recovered material as described in the section 13 "Disposal Considerations".

Section 7. Handling and Storage

Handling: Avoid contact with eyes, skin and clothing. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see Section 2.



Storage: Keep containers (bags, fiber drums, or ibcs) tightly closed in a dry and well-ventilated placed.

Section 8. Exposure Controls / Personal Protection

Engineering Controls: Assure that ventilation is adequate to control airborne levels.

Personal Protective Equipment

Eye/Face: Safety glasses or Goggles and face shield should be worn at all times.

Skin: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with the product.

Respiratory: Wear NIOSH approved respiratory protective equipment when dust or fumes of material are above applicable OSHA limits.

Other: Facilities utilizing or storing this material should be equipped with an eyewash station and safety shower.

General Hygiene Considerations: Avoid breathing fumes. Avoid ingestion. Wash thoroughly after handling. Avoid contact with eyes and skin. Use with adequate ventilation.

Exposure Guidelines

OSHA Permissible Exposure limits (PEL): 2.5 mg/m³ as F

ACGIH Threshold limit Value (TLV): 2.5 mg/m³ as F TWA

Section 9. Physical and Chemical Properties

Flash Point: Not applicable

Flammability/Explosive limits (%): Not applicable

Auto-ignition Temperature: Not applicable

Appearance: White, free-flowing crystal

Physical State: Solid

Odor: Pungent

Molecular Weight of Pure Material: 168.12

pH (1% Solution): 3.1

Vapor Pressure (mm Hg): Not applicable

Vapor Density (Air = 1): Not applicable

Boiling Point: Not applicable

Freezing/Melting Point: Not applicable

Solubility in water: Approximately 20% at room temperature

Specific Gravity: N/A

Bulk Density: ~65 lb/ft³

Volatility: Not applicable

Section 10. Stability and Reactivity

Reactivity: No data available

Chemical Stability: Stable under recommended conditions of storage, handling and proper use.

Possibility of Hazardous Reactions: No data available

Conditions to avoid: Extreme heat

Incompatible materials: Avoid contact with strong acids and alkalis (bases), explosives, organic peroxides, combustible solids and strong oxidizing agents.

Hazardous decomposition products: Extreme temperatures in the event of fire may cause formation of highly toxic and corrosive fumes.

Hazardous Polymerization: Will not occur

Corrosiveness: Acidic in solution and will attack most metals and glass.

Section 11. Toxicological Information

Acute Oral Toxicity: LD50 <200 mg/kg (oral rat)

Acute Inhalation Toxicity: LC50 850-1070 ppm, as F/1 hour (rat)

Acute Dermal Toxicity: No data available.

Serious eye damage/irritation: NIOSH- RTECS VV7800000. Material is extremely destructive to eyes and skin.

Respiratory or skin sensitization: No data available.

Germ Cell Mutagenesis: No data available.

Carcinogenicity

IARC: No components 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 components 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 components 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.

Specific Target Organ Toxicity - Single Exposure: No data available.

Specific Target Organ Toxicity - Repeated Exposure: No data available.

Aspiration Hazard: No data available.

Additional information: NIOSH - RTECS W7800000.

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

Section 12. Ecological Information

Toxicity: No data available

Persistence and degradability: No data available



Bio accumulative potential: No data available

Mobility in soil: No data available

Results of PBT and vPvB assessment: PBT /vPvB assessment not available as chemical safety assessment not required/not conducted.

Other adverse effects: No data available

Section 13. Disposal Considerations

Waste Treatment Methods: Dispose of product and contaminated packaging in accordance with all local, state, and federal environmental control regulations.

Section 14. Transport Information

US DOT

Proper Shipping Name: Ammonium Fluorosilicate

Hazard Class: Class 6.1 (Toxic)

Packing Group: PG III

Identification Number: UN2854

Emergency Guide No.: 151

Poison Inhalation Hazard: No

Marine Pollutant: No

Reportable Quantity: 1000 lbs

Canada TDG

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Emergency Guide No.: 151

IATA

Proper Shipping Name: Ammonium Fluorosilicate

Hazard Class: Class 6.1 (Toxic)

Packing Group: PG III

Identification Number: UN2854

Emergency Guide No.: 6L

IMO/IMDG

Proper Shipping Name: Ammonium Fluorosilicate

Hazard Class: Class 6.1 (Toxic)

Packing Group: PG III

Identification Number: UN2854

Emergency Guide No.: EMS-No: F-A, S-A



Section 15. Regulatory Information

CERCLA: Not listed

RCRA 261.33: Not listed

SARA Title III

Section 302/304: Not listed

RQ: 1,000 lb.

TPQ: No

Section 311/312

Acute: Yes

Chronic: Yes

Fire: No

Pressure: No

Reactivity: No

Section 313: Not listed.

TSCA: Listed on the TSCA Inventory

CA Proposition 65 (Health and Safety Code Sec. 25249.5): Not listed

WHIMS: Ammonium Fluorosilicate is listed as a Class D1B- Toxic material. This MSDS has been prepared according to the hazard criteria of the controlled Product Regulations (CPR) and the MSDS contains all the information required by CPR.

Canada DSL and NDSL: DSL On Inventory

NFPA Rating

Health: 3

Flammability: 0

Reactivity: 1

Special Hazard: None

HMIS Rating

Health: 3

Flammability: 0

Reactivity: 1



Section 16. Other Information

Disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

REVISION DATE: 5/8/2017

