



Material Safety Data Sheet

Section 1. Product and Company Identification

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|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|------------|
| Product Name | Ammonium Fluoride, GR | Product Code | AX1295 |
| Manufacturer | EMD Chemicals Inc. P.O. Box 70 480 Democrat Road Gibbstown, NJ 08027 Prior to January 1, 2003 EMD Chemicals Inc. was EM Industries, Inc. or EM Science, Division of EM Industries, Inc. | Effective Date | 9/12/2005 |
| | | Print Date | 12/15/2005 |

For More Information Call

856-423-6300 Technical Service
Monday-Friday: 8:00 AM - 5:00 PM

In Case of Emergency Call

800-424-9300 CHEMTREC (USA)
613-996-6666 CANUTEC (Canada)
24 Hours/Day: 7 Days/Week

| | |
|------------------------|---------------------|
| Synonym | Fluoroammonium |
| Material Uses | Analytical reagent. |
| Chemical Family | Inorganic salt. |

Section 2. Composition and Information on Ingredients

| Component | CAS # | % by Weight |
|-------------------|------------|-------------|
| Ammonium Fluoride | 12125-01-8 | 100 |

Section 3. Hazards Identification

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|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Physical State and Appearance | Solid. (Deliquescent crystals solid.) |
| Emergency Overview | DANGER! MAY BE FATAL IF INHALED OR SWALLOWED. CAUSES EYE AND SKIN BURNS. HARMFUL IF ABSORBED THROUGH SKIN. CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS: RESPIRATORY TRACT, SKIN, EYE, LENS OR CORNEA. |
| Routes of Entry | Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion. |
| Potential Acute Health Effects | <p>Eyes Hazardous in case of eye contact (corrosive). Causes eye burns.</p> <p>Skin Hazardous in case of skin contact (permeator, corrosive). Skin contact produces burns.</p> <p>Inhalation Extremely hazardous in case of inhalation. May be fatal if inhaled.</p> <p>Ingestion Extremely hazardous in case of ingestion. May be fatal if swallowed.</p> |
| Potential Chronic Health Effects | <p>Carcinogenic Effects This material is not known to cause cancer in animals or humans.</p> |

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Additional information See Toxicological Information (section 11)

**Medical Conditions
Aggravated by
Overexposure:**

Repeated exposure of the eyes to a low level of dust can produce eye irritation. Repeated skin exposure can produce local skin destruction, or dermatitis. Repeated inhalation of dust can produce varying degree of respiratory irritation or lung damage. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Section 4. First Aid Measures

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| Eye Contact | Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately. |
| Skin Contact | In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately. |
| Inhalation | If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately. |
| Ingestion | If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately. |

Section 5. Fire Fighting Measures

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|------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| Flammability of the Product | Non-flammable. |
| Auto-ignition Temperature | Not applicable. |
| Flash Points | Not applicable. |
| Flammable Limits | Not applicable. |
| Products of Combustion | Not available. |
| Fire Hazards in Presence of Various Substances | Not applicable. |
| Explosion Hazards in Presence of Various Substances | Risks of explosion of the product in presence of static discharge: No. Risks of explosion of the product in presence of mechanical impact: No. |
| Fire Fighting Media and Instructions | Not applicable. |
| Protective Clothing (Fire) | Not applicable. |
| Special Remarks on Fire Hazards | Not available. |
| Special Remarks on Explosion Hazards | Not available. |

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Section 6. Accidental Release Measures

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| Small Spill and Leak | Use appropriate tools to put the spilled solid in a convenient waste disposal container. |
| Large Spill and Leak | Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities. |
| Spill Kit Information | No specific spill kit required for this product. |

Section 7. Handling and Storage

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| Handling | Do not ingest. Do not breathe dust. Keep container closed. Use only with adequate ventilation. Do not get in eyes, on skin, or on clothing. |
| Storage | Keep container in a cool, well-ventilated area. |

Section 8. Exposure Controls/Personal Protection

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| Engineering Controls | Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit. |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Personal Protection

Eyes Splash goggles.

Body Synthetic apron.

Respiratory Vapor and dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.

Hands Gloves.

Feet Not applicable.

Protective Clothing (Pictograms)



Personal Protection in Case of a Large Spill

Splash goggles. Full suit. Vapor and dust respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Product Name

Ammonium Fluoride

Exposure Limits

AUVA (Austria, 1995).

Spitzenbegrenzung: 12.5 mg/m³ 2 times per shift, 30 minute(s).

TWA: 2.5 mg/m³ 8 hour(s).

Belgium Minister of Labour (Belgium, 1998).

VL: 2.5 mg/m³ 8 hour(s).

SUVA (Switzerland, 1997).

Momentanwert: 3 mg/m³

Momentanwert: 3.6 ppm

Kurzzeitgrenzwerte: 3 mg/m³ 15 minute(s).

Kurzzeitgrenzwerte: 3.6 ppm 15 minute(s).

MAK: 1.5 mg/m³ 8 hour(s).

MAK: 1.8 ppm 8 hour(s).

DK-Arbejdstylsinet (Denmark, 1996).

GV: 2.5 mg/m³ 8 hour(s).

Tyterveyslaitos (Finland, 1998).

TWA: 2.5 mg/m³ 8 hour(s).
INRS (France, 1996).
 VME: 2.5 mg/m³ 8 hour(s).
Arbeidsinspectie (Netherlands, 1999).
 TGG 15 min: 3.5 mg/m³ 15 minute(s).
N-Arbeidstilsynet (Norway, 1996).
 AN: 0.6 mg/m³ 8 hour(s).
AFS (Sweden, 1996).
 NGV: 2 mg/m³ 8 hour(s).
ACGIH (United States, 1994).
 TWA: 2.5 mg/m³ 8 hour(s).
OSHA Final Rule (United States, 1989).
 TWA: 2.5 mg/m³ 8 hour(s).

Section 9. Physical and Chemical Properties

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|--------------------------------------|---------------------------------------|
| Odor | Odorless. |
| Color | White. |
| Physical State and Appearance | Solid. (Deliquescent crystals solid.) |
| Molecular Weight | 37.05 g/mole |
| Molecular Formula | F-H4-N |
| pH | Not available. |
| Boiling/Condensation Point | Not available. |
| Melting/Freezing Point | Sublimes. |
| Specific Gravity | 1.32 (Water = 1) |
| Vapor Pressure | Not available. |
| Vapor Density | Not available. |
| Odor Threshold | Not available. |
| Evaporation Rate | Not available. |
| LogK_{ow} | Not available. |
| Solubility | Very slightly soluble in water. |

Section 10. Stability and Reactivity

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|------------------------------------------------|----------------------------------------------------|
| Stability and Reactivity | The product is stable. |
| Conditions of Instability | Not available. |
| Incompatibility with Various Substances | Reactive with acids. |
| Rem/Incompatibility | Not available. |
| Hazardous Decomposition Products | Fluoride , nitrogen oxides (NO, NO2...) , Ammonia. |
| Hazardous Polymerization | Will not occur. |

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Section 11. Toxicological Information

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|----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| RTECS Number: | Ammonium Fluoride | BQ6300000 |
| Toxicity | LD ₅₀ : Not available. LC ₅₀ : Not available. | |
| Chronic Effects on Humans | Not available. | |
| Acute Effects on Humans | Hazardous in case of eye contact (corrosive). Causes eye burns. Hazardous in case of skin contact (permeator, corrosive). Skin contact produces burns. Extremely hazardous in case of inhalation. May be fatal if inhaled. Extremely hazardous in case of ingestion. May be fatal if swallowed. | |
| Synergetic Products (Toxicologically) | Not available. | |
| Irritancy | Draize Test: Not available. | |
| Sensitization | Not available. | |
| Carcinogenic Effects | This material is not known to cause cancer in animals or humans. | |
| Toxicity to Reproductive System | Not available. | |
| Teratogenic Effects | Not available. | |
| Mutagenic Effects | Not available. | |

Section 12. Ecological Information

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| Ecotoxicity | Not available. |
| BOD5 and COD | Not available. |
| Toxicity of the Products of Biodegradation | The products of degradation are less toxic than the product itself. |

Section 13. Disposal Considerations

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| EPA Waste Number | Not available. |
| Treatment | Material does not have an EPA Waste Number and is not a listed waste, however consultation with a permitted waste disposal site (TSD) should be accomplished. Always contact a permitted waste disposal (TSD) to assure compliance with all current local, state, and Federal Regulations.. |

Section 14. Transport Information

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| DOT Classification | Proper Shipping Name: AMMONIUM FLUORIDE Hazard Class: 6.1 UN number: UN2505 Packing Group: III RQ: 100 lbs. (45.36 kg) |
| TDG Classification | Not available. |
| IMO/IMDG Classification | Proper Shipping Name: AMMONIUM FLUORIDE Hazard Class: 6.1 UN number: UN2505 Packing Group: III RQ: 100 |

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ICAO/IATA
Classification

Not available.

+ Section 15. Regulatory Information

U.S. Federal Regulations TSCA 8(b) inventory: Ammonium Fluoride
SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: Ammonium Fluoride
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Ammonium Fluoride: Immediate (Acute) Health Hazard, Delayed (Chronic) Health Hazard
SARA 313 toxic chemical notification and release reporting: Ammonium Fluoride
Clean Water Act (CWA) 307: No products were found.
Clean Water Act (CWA) 311: Ammonium Fluoride
Clean air act (CAA) 112 accidental release prevention: No products were found.
Clean air act (CAA) 112 regulated flammable substances: No products were found.
Clean air act (CAA) 112 regulated toxic substances: No products were found.

WHMIS (Canada) Class D-1B: Material causing immediate and serious toxic effects (TOXIC).
CLASS E: Corrosive solid.

CEPA DSL: Ammonium Fluoride

This product has been classified in accordance with the hazard criteria of the Controlled Product Regulations and the MSDS contains all required information.

International Regulations

EINECS Ammonium Fluoride 235-185-9

DSCL (EEC) R34- Causes burns.

International Lists Australia (NICNAS): Ammonium Fluoride

Japan (MITI): Ammonium Fluoride

Korea (TCCL): Ammonium Fluoride

Philippines (RA6969): Ammonium Fluoride

China: No products were found.

State Regulations

Pennsylvania RTK: Ammonium Fluoride: (environmental hazard, generic environmental hazard)

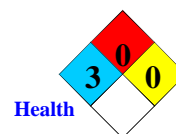
Massachusetts RTK: Ammonium Fluoride

New Jersey: Ammonium Fluoride

California prop. 65: No products were found.

Section 16. Other Information

**National Fire
Protection
Association
(U.S.A.)**



Fire Hazard

Reactivity

Specific Hazard

Changed Since Last
Revision

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[Notice to Reader](#)

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