



SAFETY DATA SHEET

MATERION

1. Identification

Product identifier Ammonium Fluoride Powder

Other means of identification

SDS number 2GD

Materion Code 2GD

CAS number 12125-01-8

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name Materion Advanced Chemicals Inc.

Address 407 N 13th Street
1316 W. St. Paul Avenue
Milwaukee, WI 53233
United States

Telephone 414.212.0257

E-mail advancedmaterials@materion.com

Contact person Noreen Atkinson

Emergency phone number Chemtrec 800.424.9300

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Acute toxicity, oral Category 3
Acute toxicity, dermal Category 3
Acute toxicity, inhalation Category 3

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements



Signal word Danger

Hazard statement Toxic if swallowed. Toxic in contact with skin. Toxic if inhaled. May cause respiratory irritation. May cause damage to organs (respiratory system) through prolonged or repeated exposure. Harmful to aquatic life. Harmful to aquatic life with long lasting effects.

Precautionary statement

Prevention Avoid breathing dust/fume. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing.

Response If on skin: Wash with plenty of water. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor. Rinse mouth. Wash contaminated clothing before reuse.

Storage Store in a well-ventilated place. Keep container tightly closed. Store locked up.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information None.

3. Composition/information on ingredients

Substances

Chemical name	Common name and synonyms	CAS number	%
Ammonium Fluoride		12125-01-8	100

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Move to fresh air. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a POISON CENTER or doctor/physician.
Skin contact	Take off immediately all contaminated clothing. Wash off with soap and plenty of water. Call a POISON CENTER or doctor/physician if you feel unwell. For minor skin contact, avoid spreading material on unaffected skin.
Eye contact	Rinse cautiously with water for several minutes. Rinse with water. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	Call a physician or poison control center immediately. Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
Most important symptoms/effects, acute and delayed	Prolonged exposure may cause chronic effects.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Treat symptomatically. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Take off immediately all contaminated clothing. In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Water.
Unsuitable extinguishing media	None known.
Specific hazards arising from the chemical	Not applicable.
Special protective equipment and precautions for firefighters	Wear suitable protective equipment.
Fire fighting equipment/instructions	In the event of fire, cool tanks with water spray. Water runoff can cause environmental damage.
Specific methods	Cool containers exposed to flames with water until well after the fire is out.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Local authorities should be advised if significant spillages cannot be contained. Immediately evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them.
Methods and materials for containment and cleaning up	Stop the flow of material, if this is without risk. Collect spillage. Prevent product from entering drains. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage**Precautions for safe handling**

Minimize dust generation and accumulation. Do not taste or swallow. Avoid breathing dust. Avoid contact with skin. Avoid contact with eyes. Avoid contact with clothing. Use only outdoors or in a well-ventilated area. When using, do not eat, drink or smoke. Wash hands thoroughly after handling. Wash contaminated clothing before reuse. Avoid release to the environment. Do not empty into drains.

Conditions for safe storage, including any incompatibilities

Store locked up. Keep container tightly closed. Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Keep out of the reach of children.

8. Exposure controls/personal protection**Occupational exposure limits****US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

Material	Type	Value
Ammonium Fluoride (CAS 12125-01-8)	PEL	2.5 mg/m3 (as fluoride)

US. OSHA Table Z-2 (29 CFR 1910.1000)

Material	Type	Value	Form
Ammonium Fluoride (CAS 12125-01-8)	TWA	2.5 mg/m3	Dust.

US. ACGIH Threshold Limit Values

Material	Type	Value
Ammonium Fluoride (CAS 12125-01-8)	TWA	2.5 mg/m3

US. NIOSH: Pocket Guide to Chemical Hazards

Material	Type	Value
Ammonium Fluoride (CAS 12125-01-8)	TWA	2.5 mg/m3

US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants

Material	Type	Value
Ammonium Fluoride (CAS 12125-01-8)	PEL	2.5 mg/m3

Biological limit values**ACGIH Biological Exposure Indices**

Material	Value	Determinant	Specimen	Sampling Time
Ammonium Fluoride (CAS 12125-01-8)	3 mg/l	Fluoride	Urine	*
	2 mg/l	Fluoride	Urine	*

* - For sampling details, please see the source document.

Appropriate engineering controls General ventilation normally adequate.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear eye/face protection.

Skin protection

Hand protection Wear protective gloves. Not normally needed.

Other Wear appropriate chemical resistant clothing. Wear protective gloves.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards Not available.

General hygiene considerations When using, do not eat, drink or smoke. Avoid contact with eyes. Avoid contact with skin. Avoid contact with clothing. Wash hands before breaks and immediately after handling the product. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Appearance

Physical state	Solid.
Form	Solid. Powder
Color	Not available.
Odor	Not available.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	< 0.0000001 kPa at 25 °C
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.

Other information

Density	1.01 g/cm ³ estimated
Molecular formula	F-H4-N
Molecular weight	37.04 g/mol
Specific gravity	1.02

10. Stability and reactivity

Reactivity	Not available.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	None under normal conditions.
Incompatible materials	None known.

Hazardous decomposition products Hydrogen fluoride. Nitrogen oxides (NOx).

11. Toxicological information

Information on likely routes of exposure

Inhalation Toxic by inhalation.
Skin contact Toxic in contact with skin.
Eye contact Due to lack of data the classification is not possible.
Ingestion Toxic if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics Not available.

Information on toxicological effects

Acute toxicity Toxic by inhalation. Toxic if swallowed. Toxic in contact with skin. May cause respiratory irritation.

Skin corrosion/irritation Due to lack of data the classification is not possible.

Serious eye damage/eye irritation Due to lack of data the classification is not possible.

Respiratory or skin sensitization

Respiratory sensitization Due to lack of data the classification is not possible.

Skin sensitization Due to lack of data the classification is not possible.

Germ cell mutagenicity Due to lack of data the classification is not possible.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

Ammonium Fluoride (CAS 12125-01-8) 3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity Due to lack of data the classification is not possible.

Specific target organ toxicity - single exposure Respiratory tract irritation.

Specific target organ toxicity - repeated exposure May cause damage to organs (respiratory system) through prolonged or repeated exposure.

Aspiration hazard Due to lack of data the classification is not possible.

Chronic effects May cause damage to organs through prolonged or repeated exposure.

12. Ecological information

Ecotoxicity Harmful to aquatic life with long lasting effects. Accumulation in aquatic organisms is expected.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential Not available.

Mobility in soil Not available.

Other adverse effects Not available.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Waste from residues / unused products

Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging

Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

UN number	UN2505
UN proper shipping name	Ammonium fluoride
Transport hazard class(es)	
Class	6.1(PGIII)
Subsidiary risk	-
Label(s)	6.1
Packing group	III
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	IB8, IP3, T1, TP33
Packaging exceptions	153
Packaging non bulk	213
Packaging bulk	240

IATA

UN number	UN2505
UN proper shipping name	Ammonium fluoride
Transport hazard class(es)	
Class	6.1(PGIII)
Subsidiary risk	-
Packing group	III
Environmental hazards	No.
ERG Code	6L
Special precautions for user	Not available.
Other information	
Passenger and cargo aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.

IMDG

UN number	UN2505
UN proper shipping name	AMMONIUM FLUORIDE
Transport hazard class(es)	
Class	6.1(PGIII)
Subsidiary risk	-
Packing group	III
Environmental hazards	
Marine pollutant	No.
EmS	F-A, S-A
Special precautions for user	Not available.

DOT



IATA; IMDG



15. Regulatory information

US federal regulations All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Ammonium Fluoride (CAS 12125-01-8) Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

- Immediate Hazard - Yes
- Delayed Hazard - No
- Fire Hazard - No
- Pressure Hazard - No
- Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Ammonium Fluoride	12125-01-8	100

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Clean Water Act (CWA) Section 112(r) (40 CFR 68.130) Hazardous substance

Safe Drinking Water Act (SDWA) 4.0 mg/l
4.0 mg/l

US state regulations

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

16. Other information, including date of preparation or last revision**Issue date**

01-18-2018

Version #

01

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