



SAFETY DATA SHEET

MATERION

1. Identification

| | | |
|-------------------------------|---|--|
| Product identifier | Ammonium Fluoborate Powder | |
| Other means of identification | | |
| SDS number | 1AD | |
| Materion Code | 1AD | |
| CAS number | 13826-83-0 | |
| Synonyms | AMMONIUM FLUOBORATE * AMMONIUM FLUOROBORATE * Ammonium borofluoride * Ammonium tetrafluoroborate | |

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 | Skin corrosion/irritation | Category 1 |
| | Serious eye damage/eye irritation | Category 1 |
| | Specific target organ toxicity, repeated exposure | Category 1 |
| Environmental hazards | Not classified. | |
| OSHA defined hazards | Not classified. | |
| Label elements | | |
| Hazard symbol | None. | |
| Signal word | None. | |
| Hazard statement | Not available. | |
| Precautionary statement | | |
| Prevention | Not available. | |
| Response | Not available. | |
| Storage | Not available. | |
| Disposal | Not available. | |
| 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 Fluoborate Powder | AMMONIUM FLUOBORATE AMMONIUM FLUOROBORATE Ammonium borofluoride Ammonium tetrafluoroborate | 13826-83-0 | 100 |

4. First-aid measures

| | |
|--|----------------|
| Inhalation | Not available. |
| Skin contact | Not available. |
| Eye contact | Not available. |
| Ingestion | Not available. |
| Most important symptoms/effects, acute and delayed | Not available. |

5. Fire-fighting measures

| | |
|---|-----------------|
| Suitable extinguishing media | Not available. |
| Unsuitable extinguishing media | Not available. |
| Specific hazards arising from the chemical | Not applicable. |
| Special protective equipment and precautions for firefighters | Not available. |

6. Accidental release measures

| | |
|---|----------------|
| Personal precautions, protective equipment and emergency procedures | Not available. |
| Methods and materials for containment and cleaning up | Not available. |
| Environmental precautions | Not available. |

7. Handling and storage

| | |
|--|----------------|
| Precautions for safe handling | Not available. |
| Conditions for safe storage, including any incompatibilities | Not available. |

8. Exposure controls/personal protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

| Material | Type | Value | Form |
|---|------|---------------------|---------------------|
| Ammonium Fluoborate Powder (CAS 13826-83-0) | STEL | 6 mg/m ³ | Inhalable fraction. |
| | TWA | 2 mg/m ³ | Inhalable fraction. |

US. NIOSH: Pocket Guide to Chemical Hazards

| Material | Type | Value |
|---|------|-----------------------|
| Ammonium Fluoborate Powder (CAS 13826-83-0) | TWA | 2.5 mg/m ³ |

Biological limit values No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls Not available.

Individual protection measures, such as personal protective equipment

Eye/face protection Not available.

Skin protection

Hand protection Not available.

| | |
|------------------------|----------------|
| Other | Not available. |
| Respiratory protection | Not available. |
| Thermal hazards | Not available. |

9. Physical and chemical properties

Appearance

| | |
|--|-------------------|
| Physical state | Solid. |
| Form | Powder |
| Color | Not available. |
| Odor | Not available. |
| Odor threshold | Not available. |
| pH | Not available. |
| Melting point/freezing point | 908.6 °F (487 °C) |
| 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 | Not available. |
| 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 | |
| Molecular formula | B-F4.H4-N |
| Molecular weight | 104.84 g/mol |

10. Stability and reactivity

| | |
|------------------------------------|----------------|
| Reactivity | Not available. |
| Chemical stability | Not available. |
| Possibility of hazardous reactions | Not available. |
| Conditions to avoid | Not available. |
| Incompatible materials | Not available. |
| Hazardous decomposition products | Not available. |

11. Toxicological information

Information on likely routes of exposure

| | |
|--------------|----------------|
| Inhalation | Not available. |
| Skin contact | Not available. |
| Eye contact | Not available. |
| Ingestion | Not available. |

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

Information on toxicological effects

| | |
|-----------------------------------|----------------|
| Acute toxicity | Not available. |
| Skin corrosion/irritation | Not available. |
| Serious eye damage/eye irritation | Not available. |
| Respiratory or skin sensitization | |
| Respiratory sensitization | Not available. |
| Skin sensitization | Not available. |
| Germ cell mutagenicity | Not available. |

Carcinogenicity

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

| | |
|--|----------------|
| Reproductive toxicity | Not available. |
| Specific target organ toxicity - single exposure | Not available. |
| Specific target organ toxicity - repeated exposure | Not available. |
| Aspiration hazard | Not available. |

12. Ecological information

| | |
|-------------------------------|--|
| Ecotoxicity | No ecotoxicity data noted for the ingredient(s). |
| Persistence and degradability | Not available. |
| Bioaccumulative potential | Not available. |
| Mobility in soil | Not available. |
| Other adverse effects | Not available. |

13. Disposal considerations

| | |
|---------------------------------------|----------------|
| Disposal instructions | Not available. |
| Waste from residues / unused products | Not available. |
| Contaminated packaging | Not available. |

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

15. Regulatory information**US federal regulations****TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Ammonium Fluoborate Powder (CAS 13826-83-0) 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 - Yes |
| | 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 Fluoborate Powder | 13826-83-0 | 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) | Not regulated. |
|---------------------------------------|----------------|

US state regulations**US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))**

Ammonium Fluoborate Powder (CAS 13826-83-0)

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

| | |
|----------------------|----------------|
| Issue date | 09-10-2014 |
| Revision date | 03-16-2018 |
| Version # | 06 |
| Disclaimer | Not available. |