

# Safety Data Sheet

## Ammonium Fluoride Crystals, ACS

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Ammonium Fluoride Crystals, ACS

**Synonyms/Generic Names:** None

**Product Number:** 0480

**Product Use:** Industrial, Manufacturing or Laboratory use

**Manufacturer:** Columbus Chemical Industries, Inc.  
N4335 Temkin Rd.  
Columbus, WI. 53925

**For More Information Call:** 920-623-2140 (Monday-Friday 8:00-4:30)

**In Case of Emergency Call:** CHEMTREC - 800-424-9300 or 703-527-3887 (24 Hours/Day, 7 Days/Week)

### 2. HAZARDS IDENTIFICATION

**OSHA Hazards:** Target organ effect, Toxic by inhalation, Toxic by ingestion, Toxic by skin absorption.

**Target Organs:** Bone

**Signal Words:** Danger

**Pictograms:**



**GHS Classification:**

Acute toxicity, Oral	Category 3
Acute toxicity, Inhalation	Category 3
Acute toxicity, Dermal	Category 3

**GHS Label Elements, including precautionary statements:**

**Hazard Statements:**

H301+H311	Toxic if swallowed or in contact with skin.
H331	Toxic if inhaled

**Precautionary Statements:**

P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P280	Wear protective gloves/protective clothing.
P301+P310	Call a POISON CENTER or doctor/physician.

## Potential Health Effects

<b>Eyes</b>	May cause eye irritation.
<b>Inhalation</b>	Toxic if inhaled. May cause respiratory tract irritation.
<b>Skin</b>	Toxic if absorbed through skin. May cause skin irritation.
<b>Ingestion</b>	Toxic if swallowed.

## NFPA Ratings

<b>Health</b>	2
<b>Flammability</b>	0
<b>Reactivity</b>	0
<b>Specific hazard</b>	Not Available

## HMIS Ratings

<b>Health</b>	2
<b>Fire</b>	0
<b>Reactivity</b>	0
<b>Personal</b>	E

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

<b>Component</b>	<b>Weight %</b>	<b>CAS #</b>	<b>EINECS# / ELINCS#</b>	<b>Formula</b>	<b>Molecular Weight</b>
Ammonium Fluoride	100	12125-01-8	235-185-9	NH <sub>4</sub> F	37.04 g/mol

## 4. FIRST-AID MEASURES

<b>Eyes</b>	In case of eye contact, rinse with plenty of water and seek medical attention.
<b>Inhalation</b>	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.
<b>Skin</b>	Flush with plenty of water for at least 15 minutes and wash using soap. Get medical attention.
<b>Ingestion</b>	<b>Do Not Induce Vomiting!</b> Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention.

## 5. FIRE-FIGHTING MEASURES

<b>Suitable (and unsuitable) extinguishing media</b>	Product is not flammable. Use appropriate media for adjacent fire. Cool containers with water.
<b>Special protective equipment and precautions for firefighters</b>	Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.
<b>Specific hazards arising from the chemical</b>	Emits toxic fumes (ammonia, hydrogen fluoride, nitrogen oxides) under fire conditions. (See also Stability and Reactivity section).

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal precautions, protective equipment and emergency procedures</b>	See section 8 for recommendations on the use of personal protective equipment.
<b>Environmental precautions</b>	Prevent spillage from entering drains. Any release to the environment may be subject to federal/national or local reporting requirements.
<b>Methods and materials for containment and cleaning up</b>	Pick up and arrange disposal without creating dust. Sweep up and shovel. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with regulations.

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## 7. HANDLING AND STORAGE

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### Precautions for safe handling

See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use. Avoid formation of dusts.

### Conditions for safe storage, including any incompatibilities

Store in cool, dry well ventilated area. Keep away from incompatible materials (see section 10 for incompatibilities). Material is hygroscopic.

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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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### Occupational exposure controls:

Component	Exposure Limits	Basis	Entity
Ammonium Fluoride	2.5 mg/m <sup>3</sup>	PEL	OSHA
	2.5 mg/m <sup>3</sup>	TLV	ACGIH

TWA: Time Weighted Average over 8 hours of work.

TLV: Threshold Limit Value over 8 hours of work.

REL: Recommended Exposure Limit

PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit during x minutes.

IDLH: Immediately Dangerous to Life or Health

WEEL: Workplace Environmental Exposure Levels

CEIL: Ceiling

### Personal Protection

<b>Eyes</b>	Wear chemical safety glasses or goggles.
<b>Inhalation</b>	Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.
<b>Skin</b>	Wear nitrile or rubber gloves, apron or lab coat, and boots. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
<b>Other</b>	Not Available

### Other Recommendations

Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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Appearance (physical state, color, etc.)	Clear to white crystals.
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 Flammable
Evaporation rate	Not Available
Flammability (solid, gas)	Not Flammable
Upper/lower flammability or explosive limit	Not Flammable
Vapor pressure	Not Available

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Vapor density	Not Available
Relative density	Not Available
Solubility (ies)	Completely soluble in water.
Partition coefficient: n-octanol/water	Not Available
Auto-ignition temperature	Not Available
Decomposition temperature	Not Available

## 10. STABILITY AND REACTIVITY

<b>Chemical Stability</b>	Stable
<b>Possibility of Hazardous Reactions</b>	Will not occur.
<b>Conditions to Avoid</b>	Moisture
<b>Incompatible Materials</b>	Oxidizers, metals, acids, alkalis, potassium chlorate, sodium nitrite.
<b>Hazardous Decomposition Products</b>	Nitrogen oxides, hydrogen fluoride gas, ammonia.

## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity

<b>Skin</b>	Not Available
<b>Eyes</b>	Not Available
<b>Respiratory</b>	Not Available
<b>Ingestion</b>	Not Available
<b>Other</b>	LD50 Intraperitoneal – rat – 31 mg/kg

### Carcinogenicity

<b>IARC</b>	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.
<b>ACGIH</b>	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
<b>NTP</b>	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.
<b>OSHA</b>	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.

### Signs & Symptoms of Exposure

<b>Skin</b>	Redness, itching, burns.
<b>Eyes</b>	Tearing, redness, itching, burns.
<b>Respiratory</b>	Spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis, and pulmonary edema, burning, coughing, wheezing, laryngitis, shortness of breath, head aches.
<b>Ingestion</b>	Burning, nausea, vomiting.

<b>Chronic Toxicity</b>	Not Available
<b>Teratogenicity</b>	Not Available
<b>Mutagenicity</b>	Not Available
<b>Embryotoxicity</b>	Not Available
<b>Specific Target Organ Toxicity</b>	Not Available
<b>Reproductive Toxicity</b>	Not Available
<b>Respiratory/Skin Sensitization</b>	Not Available

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## 12. ECOLOGICAL INFORMATION

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### Ecotoxicity

<b>Aquatic Vertebrate</b>	Not Available
<b>Aquatic Invertebrate</b>	Not Available
<b>Terrestrial</b>	Not Available

<b>Persistence and Degradability</b>	Not Available
<b>Bioaccumulative Potential</b>	Not Available
<b>Mobility in Soil</b>	Not Available
<b>PBT and vPvB Assessment</b>	Not Available
<b>Other Adverse Effects</b>	Not Available

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## 13. DISPOSAL CONSIDERATIONS

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<b>Waste Residues</b>	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product or residue.
<b>Product Containers</b>	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

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## 14. TRANSPORTATION INFORMATION

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US DOT	UN2505, Ammonium Fluoride, 6.1, pg III
TDG	UN2505, AMMONIUM FLUORIDE, 6.1, pg III
IMDG	UN2505, AMMONIUM FLUORIDE, 6.1, pg III
Marine Pollutant	No
IATA/ICAO	UN2505, Ammonium Fluoride, 6.1, pg III

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## 15. REGULATORY INFORMATION

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TSCA Inventory Status	All ingredients are listed on the TSCA inventory.
DSCL (EEC)	All ingredients are listed on the DSCL inventory.
California Proposition 65	Not Listed
SARA 302	Not Listed
SARA 304	Not Listed
SARA 311	Ammonium Fluoride
SARA 312	Ammonium Fluoride
SARA 313	Not Listed
WHMIS Canada	Class D-1B: Toxic material causing immediate and serious toxic effects. Class D-2A: Very toxic material causing other toxic effects.

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## 16. OTHER INFORMATION

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Revision	Date
Revision 1	03/20/2013

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