

Ammonium Bifluoride 30% Technical

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Ammonium Bifluoride 30% Technical

Synonyms/Generic Names: Neutral ammonium fluoride, ammonium acid fluoride, Ammonium hydrogen fluoride, ammonium hydrofluoride

Product Number: 0354

Product Use: Industrial, Manufacturing or Laboratory use

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

For More Information: 920-623-2140 (Monday-Friday 8:00-4:30)
www.columbuschemical.com

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

2. HAZARDS IDENTIFICATION

Hazard Not Otherwise Classified (HNOC): None

Signal Words: Danger

Pictograms:



GHS Classification:

Acute toxicity, Oral	Category 2
Acute toxicity, Inhalation	Category 2
Acute toxicity, Dermal	Category 1
Skin corrosion	Category 1A
Serious eye damage	Category 1

GHS Label Elements, including precautionary statements:

Hazard Statements:

H300+H310+H330	Fatal if swallowed or in contact with skin.
H314	Causes severe skin burns and eye damage.

Precautionary Statements:

P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P262	Do not get in eyes, on skin, or on clothing.

P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P284	In case of inadequate ventilation, wear respiratory protection.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do not induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor/physician.
P363	Wash contaminated clothing before reuse.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local regulations.

Potential Health Effects

Eyes	Causes severe eye burns.
Inhalation	Toxic if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Skin	May be fatal if absorbed through skin. Causes skin burns.
Ingestion	May be fatal if swallowed.

NFPA Ratings

Health	3
Flammability	0
Reactivity	0
Specific hazard	Not Available

HMIS Ratings

Health	3
Fire	0
Reactivity	0

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight %	CAS #	EINECS# / ELINCS#	Formula	Molecular Weight
Ammonium Bifluoride	29-31	1341-49-7	215-676-4	NH ₅ F ₂	57.04 g/mol
Water	Balance	7732-18-5	231-791-2	H ₂ O	18.00 g/mol

4. FIRST-AID MEASURES

Eyes	Rinse with plenty of water for at least 15 minutes and seek medical attention immediately.
Inhalation	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention if necessary.
Skin	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention immediately.
Ingestion	Do Not Induce Vomiting! Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention immediately.

5. FIREFIGHTING MEASURES

Suitable (and unsuitable) extinguishing media	Product is not flammable. Use appropriate media for adjacent fire. Use water to keep containers cool.
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Special protective equipment and precautions for firefighters	Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.
Specific hazards arising from the chemical	May release toxic hydrogen fluoride. Contact with reactive metals may result in the generation of flammable hydrogen gas. Container explosion may occur. (See also Stability and Reactivity section).

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	See section 8 for recommendations on the use of personal protective equipment.
Environmental precautions	Prevent spillage from entering drains. Any release to the environment may be subject to a federal/national or local reporting requirements.
Methods and materials for containment and cleaning up	Cleanup personnel need personal protection from inhalation and skin/eye contact. Evacuate and ventilate the area. Neutralize spill. Absorb neutralized spill with vermiculite or other inert absorbent material, then place in a suitable container for disposal. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste or cleanup materials in accordance with regulations. Containers, even when empty, will retain residue and vapors.

7. HANDLING AND STORAGE

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 aerosols.

Conditions for safe storage, including any incompatibilities

Corrosive! Store in a cool, dry, well ventilated area. Keep out of direct sunlight. Keep containers tightly closed. Keep away from incompatible materials (see section 10 for incompatibilities).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Controls:

Component	Exposure Limits	Basis	Entity
Ammonium Bifluoride	2.5 mg/m ³	PEL	OSHA
	2.5 mg/m ³	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

Eyes	Wear chemical safety glasses with a face shield for splash protection.
Inhalation	Provide local exhaust, preferably mechanical. If necessary use an approved respirator with acid vapor cartridges.
Skin	Wear neoprene or rubber gloves, apron and other protective clothing appropriate to the risk of exposure. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Other	Not Available

Other Recommendations

Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling. Have supplies and equipment for neutralization and running water available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.)	Colorless fluid which may fume in air.
Odor	Sharp irritating odor.
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 Explosive
Vapor pressure	Not Available
Vapor density	Not Available
Specific gravity	1.08
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

Chemical Stability	Stable
Possibility of Hazardous Reactions	Will not occur.
Conditions to Avoid	Heat, incompatibles
Incompatible Materials	Acids, Alkalis, 2-Aminoethanol, Chlorosulfuric acid, glass, metals, Nitrogen compounds, oleum.
Hazardous Decomposition Products	Ammonia. Will yield hydrogen gas from contact with metals; SiF ₄ from reaction with silica or glass, nitrogen oxides, hydrogen fluoride gas.

11. TOXICOLOGICAL INFORMATION**Acute Toxicity**

Skin	Not Available
Eyes	Not Available
Respiratory	Not Available
Ingestion	Not Available
Other	LD50 Intraperitoneal – rat – 95 mg/kg (calculated – ammonium fluoride)

Carcinogenicity

IARC	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH	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.
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.

Signs & Symptoms of Exposure

Skin	Severe skin burns/ulceration, cyanosis, jaundice,
Eyes	Conjunctivitis, corneal burns,
Respiratory	Chest pain, shortness of breath, bronchopneumonia, nausea vomiting, diarrhea
Ingestion	Spitting blood, shock, muscle spasm, convulsions, hematuria, abdominal pain,

Chronic Toxicity	Not Available
Teratogenicity	Not Available
Mutagenicity	Not Available
Embryotoxicity	Not Available
Target Organ(s)	Liver, Kidney, Bone
Reproductive Toxicity	Not Available
Respiratory/Skin Sensitization	Not Available

12. ECOLOGICAL INFORMATION**Ecotoxicity**

Aquatic Vertebrate	Not Available
Aquatic Invertebrate	Not Available
Terrestrial	Not Available

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

13. DISPOSAL CONSIDERATIONS

Waste Product or Residues	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.
Product Containers	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.

14. TRANSPORT INFORMATION

US DOT	UN2817, Ammonium hydrogendifluoride, solution, 8, (6.1), pg II
TDG	UN2817, AMMONIUM HYDROGENDIFLUORIDE, SOLUTION, 8, (6.1), PG II
IMDG	UN2817, AMMONIUM HYDROGENDIFLUORIDE, SOLUTION, 8, (6.1), PG II
Marine Pollutant	No
IATA/ICAO	UN2817, Ammonium hydrogendifluoride, solution, 8, (6.1), pg II

15. REGULATORY INFORMATION

TSCA Inventory Status	All ingredients are listed on the TSCA Active inventory.
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DSL / NDSL	All ingredients are listed on the DSL inventory.
California Proposition 65	Not Listed
Rhode Island: Hazardous Substance List	Not Listed
Massachusetts: Toxic or Hazardous Substance List, Right to Know	Not Listed
Pennsylvania: Hazardous Substance List	Listed: Ammonium Bifluoride
New Jersey: Right to Know Hazardous Substance List	Listed: Ammonium Bifluoride
SARA 302	Not Listed
SARA 304	Not Listed
SARA 311	Acute Health Hazard.
SARA 312	Acute Health Hazard.
SARA 313	Not Listed
WHMIS Canada	Not Listed

16. OTHER INFORMATION

Revision	Date
Original	09/06/2017
Revision 1	04/22/2022

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