



Safety Data Sheet Ammonium Bifluoride

Section 1: Chemical Product and Company Identification

Product Name: Ammonium Bifluoride

Catalog Codes: 563

CAS#: 1341-49-7

RTECS: BQ9200000

TSCA: -

Synonym: Ammonium hydrogen difluoride

Chemical Name: Ammonium Bifluoride

Chemical Formula: (NH₄)HF₂

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Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Ammonium Bifluoride	1341-49-7	100

Toxicological Data on Ingredients: Acute toxicity estimate Oral - 100,1 mg/kg.

Section 3: Hazards Identification

Classification of the substance or mixture

Acute toxicity, (Category 3)

H301: Toxic if swallowed.

Skin corrosion, (Sub-category 1B)

H314: Causes severe skin burns and eye damage.

Serious eye damage, (Category 1)

H318: Causes serious eye damage.

Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal Word Hazard Danger
Statements H301 Toxic if swallowed.
H314 Causes severe skin burns and eye damage.

Precautionary Statements

P260 Do not breathe dust.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P363 Wash contaminated clothing before reuse.
Supplemental Hazard none

Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Section 4: First Aid Measures**Description of first-aid measures****General advice**

First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air. Call in physician.

In case of skin contact In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

In case of eye contact

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist.
Remove contact lenses.

If swallowed

If swallowed: give water to drink (two glasses at most). Seek medical advice immediately.
In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as quickly as possible. Do not attempt to neutralise.

Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 3) and/or in section 11

Indication of any immediate medical attention and special treatment needed

No data available

Section 5: Fire and Explosion Data

Extinguishing media

Suitable extinguishing media

Water Foam Carbon dioxide (CO₂) Dry powder Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

Special hazards arising from the substance or mixture

Nitrogen oxides (NO_x)

Hydrogen fluoride

Combustible.

Not combustible.

Development of hazardous combustion gases or vapours possible in the event of fire.

Ambient fire may liberate hazardous vapours.

Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire

extinguishing water from contaminating surface water or the ground water system.

Section 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

Environmental precautions

Do not let product enter drains.

Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully. Dispose of properly. Clean up affected area. Avoid generation of dusts.

Reference to other sections

For disposal see section 13.

Section 7: Handling and Storage

Precautions for safe handling

For precautions see section 3.

Conditions for safe storage, including any incompatibilities

Storage conditions

Tightly closed. Dry. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons.

Storage class

Storage class (TRGS 510): 6.1D: Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects

Section 8: Exposure Controls/Personal Protection

Control parameters

Ingredients with workplace control parameters

Exposure controls

Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate

government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles

Skin protection

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 480 min

Material tested:KCL 741 Dermatril® L

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Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 480 min

Material tested:KCL 741 Dermatril® L

Body Protection

protective clothing

Respiratory protection

Recommended Filter type: Filter B-(P3)

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.

These measures have to be properly documented.

Control of environmental exposure

Do not let product enter drains.

Section9:PhysicalandChemical Properties

Information on basic physical and chemical properties

a) Physical state	Solid
b)Color	white
c)Odor	No data available
d)Melting point/freezing point	Melting point/range: 125 °C - lit.

e)Initial boiling point and boiling range	No data available
f)Flammability (solid, gas)	The product is not flammable.
g)Upper/lower flammability or explosive limits	No data available
h)Flash point	Not applicable
i) Autoignition temperature	No data available
j) Decomposition temperature	No data available
k)pH	
l) Viscosity	No data available
	Viscosity, kinematic: No data available
	Viscosity, dynamic: No data available
m)Water solubility	10.000 g/l at 20 °C - Regulation (EC) No. 440/2008, Annex, A.6- completely soluble
n)Partition coefficient: n-octanol/water	-Not applicable for inorganic substances
o)Vapor pressure	0,0108 hPa at 20 °C - OECD Test Guideline 104
p)Density	1,500 g/cm ³ at 25 °C
Relative density	No data available
q)Relative vapor density	No data available
r)Particle characteristics	No data available
s)Explosive properties	
t)Oxidizing properties	No data available
	No data available

Other safety information

No data available

Section 10: Stability and Reactivity Data

Reactivity

The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

Chemical stability

The product is chemically stable under standard ambient conditions (room temperature).

Possibility of hazardous reactions

Violent reactions possible with:

Generates dangerous gases or fumes in contact with:

acids

Release of:

Hydrogen fluoride

alkalines

Release of:

Ammonia

Risk of explosion with:

halogen-halogen compounds

Aluminum

Iron

metals

Zinc

Conditions to avoid

Avoid moisture.

no information available

Incompatible materials

glass, quartzes/silicate ceramics

Hazardous decomposition products

In the event of fire: see section 5

Section 11: Toxicological Information**Information on toxicological effects****Acute toxicity**

Acute toxicity estimate Oral - 100,1 mg/kg

(Expert judgment)

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

Remarks: Causes skin burns.

Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Serious eye damage/eye irritation

Remarks: Causes serious eye damage.

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

Test Type: Ames test

Test system: S. typhimurium

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Additional Information**Endocrine disrupting properties****Product:**

Assessment :

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

RTECS: BQ9200000

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache, Nausea, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Section 12: Ecological Information**Toxicity**

Toxicity to fish LC50 - Fish - 421,4 mg/l - 96 h

Remarks: (ECHA)

Toxicity to bacteria

Persistence and degradability

The methods for determining biodegradability are not applicable to inorganic substances.

Bioaccumulative potential

No data available

Mobility in soil

No data available

Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Endocrine disrupting properties**Product:**

Assessment :

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Other adverse effects

No data available

Section 13: Disposal Considerations**Waste treatment methods****Product**

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself

Section 14: Transport Information**UN number**

ADR/RID: 1727

IMDG: 1727

IATA: 1727

UN proper shipping name

ADR/RID: AMMONIUM HYDROGENDIFLUORIDE, SOLID

IMDG: AMMONIUM HYDROGENDIFLUORIDE, SOLID

IATA: Ammonium hydrogendifluoride, solid

Transport hazard class(es)

ADR/RID: 8

IMDG: 8

IATA: 8

Packaging group

ADR/RID: II

IMDG: II

IATA: II

Environmental hazards

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

Special precautions for user

Tunnel restriction code

: (E)

Further information

: No data available

Section 15: Other Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

National legislation

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

H2

ACUTE TOXIC

Other regulations

Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

Take note of Dir 94/33/EC on the protection of young people at work.

Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

Section 16: Other Information

References: Not available

Other Special Considerations: Not available

Created: 09/2024

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