



DISSOLUTION SOLUTION

SAFETY DATA SHEET

OSHA HCS (29 CFR 1910.1200)

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Chemical Name	Ammonium Bifluoride Solution (1%)
CAS No.	1341-49-7
Trade Name	Dissolution Solution
Product Code	CH-1-L, CH-1, CH-1-b

Relevant identified uses of the substance or mixture and uses advised against

Identified Use(s)	Laboratory / Analytical / Env. Sampling
Uses Advised Against	None assigned.

Identity of manufacturer/importer and other suppliers

Company Identification	Berylliant, Inc. 4541 East Fort Lowell Road Tucson, AZ 85712 520-321-7680
Telephone	
E-Mail (competent person)	info@berylliant.com

Emergency telephone number

Emergency Phone No.	Verisk 3E Emergency Response Hotline: 1-855-243-2288 (inside U.S./North America) 1-760-602-8703 (outside U.S./North America)
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SECTION 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture

OSHA HCS (29 CFR 1910.1200)

Skin Corr. 1B; Eye Dam. 1

Label elements

Hazard Symbol



DANGER

Signal Word(s)

Hazard Statement(s)

H314: Causes severe skin burns and eye damage.

Precautionary Statement(s)

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P264: Wash hands and exposed skin thoroughly after handling.

P301+P330: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Treat symptomatically.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P315: Get immediate medical advice/attention.



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P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P363: Wash contaminated clothing before reuse. P315: Get immediate medical advice/attention.

P102: Keep out of reach of children.

Other hazards

None known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	% wt.	CAS No.
Ammonium Bifluoride	1	1341-49-7
Water	99	7732-18-5

SECTION 4: FIRST AID MEASURES



Description of first aid measures

Inhalation

Not normally required. Move person to fresh air. If breathing is laboured, administer oxygen. If symptoms develop, obtain medical attention.

Skin Contact

Take off immediately all contaminated clothing. Rinse skin with water/shower. Get immediate medical advice/attention. Wash contaminated clothing before reuse

Eye Contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.

Ingestion

Rinse mouth. Do NOT induce vomiting. Get medical attention.

Most important symptoms and effects, both acute and delayed

Causes severe skin burns and eye damage. May cause delayed skin necrosis.

Indication of any immediate medical attention and special treatment needed

None known.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

- Suitable Extinguishing Media
- Unsuitable Extinguishing Media

Non-flammable / Non-combustible. As appropriate for surrounding fire.
None known.

Special hazards arising from the substance or mixture

None known.



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Advice for fire-fighters

A self contained breathing apparatus and suitable protective clothing should be worn in fire conditions.

Hazardous decomposition product(s)

Thermal decomposition products include: Hydrogen fluoride, Ammonia, Nitrogen oxides, Acid smoke.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Wear protective gloves/protective clothing/eye protection/face protection.

Environmental precautions

Avoid run off to waterways and sewers.

Methods and material for containment and cleaning up

Contain spillages with sand, earth or any suitable adsorbent material. Absorb spillage in inert material and shovel up. Transfer to a container for disposal.

Reference to other sections

None

Additional Information

None

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Wear protective gloves/eye protection. Do not get in eyes, on skin, or on clothing.

Hygiene Measures

Wash hands and exposed skin thoroughly after handling.

Environmental Exposure Controls

Avoid release to the environment.

Conditions for safe storage, including any incompatibilities

-Storage temperature

Store at room temperature. Keep only in original or other compatible container.

-Incompatible materials

Avoid contact with acids and alkalis.

Specific end use(s)

Laboratory / Analytical / Env. Sampling

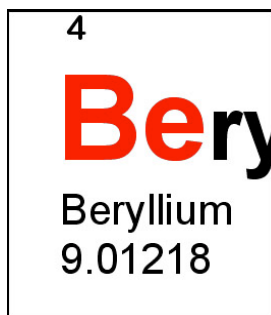
SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

SUBSTANCE.	CAS No.	(8hr TWA)		STEL		Note:
		PEL (OSHA)	TLV (ACGIH)	PEL (OSHA)	TLV (ACGIH)	
Fluorides	-----	2.5 mg/m3	2.5 mg/m3	-----	-----	-----
Ammonia	7664-41-7	50 ppm	25 ppm	-----	35 ppm	-----

Recommended monitoring method

NIOSH 7902 (Fluorides), Electrochemical sensor (Ammonia),



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Exposure controls

Appropriate engineering controls

Guarantee that the eye flushing systems and safety showers are located close to the working place.

Personal protection equipment

Eye/face protection



Wear protective eyewear (goggles, face shield, or safety glasses).

Skin protection (Hand protection/ Other)



Wear protective gloves. (Neoprene, Nitrile rubber, or Butyl rubber)

Respiratory protection



Not normally required.

Environmental Exposure Controls

Avoid release to the environment.

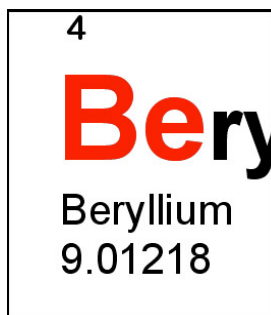
SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Liquid
Color.	Colourless
Odor	Almost odourless
Odor Threshold (ppm)	Not available
pH (Value)	4.3
Melting Point (°C) / Freezing Point (°C)	~ 0 (~ 32 °F)
Boiling point/boiling range (°C):	~ 100 (~ 212 °F)
Flash Point (°C)	Non-flammable / Non-combustible.
Evaporation Rate	Not available
Flammability (solid, gas)	Not applicable
Explosive Limit Ranges	Non-flammable / Non-combustible.
Vapour pressure (Pascal)	2986
Vapour Density (Air=1)	Not available
Density (g/ml)	Not available
Solubility (Water)	Miscible
Solubility (Other)	Not available
Partition Coefficient (n-Octanol/water)	Not available
Auto Ignition Point (°C)	Non-flammable / Non-combustible.
Decomposition Temperature (°C)	Not available
Kinematic Viscosity (cSt)	Not available
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.

Other information

None.



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SECTION 10: STABILITY AND REACTIVITY

Reactivity	Stable under normal conditions.
Chemical stability	Stable.
Possibility of hazardous reactions	None anticipated.
Conditions to avoid	Incompatible materials
Incompatible materials	Avoid contact with acids and alkalis. Contact with metals liberates flammable gas. Reacts with silicon materials like glass or ceramics to form Silicon Tetrafluoride (SiF ₄).
Hazardous decomposition product(s)	Thermal decomposition products include: Hydrogen fluoride, Ammonia, Nitrogen oxides, Acrid smoke.

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes: Skin Contact, Eye Contact

Ammonium Bifluoride (CAS No. 1341-49-7):

Acute toxicity	Oral: LD50 130 mg/kg-bw
Irritation/Corrosivity	Causes severe skin burns and eye damage.
Sensitization	Not to be expected.
Repeated dose toxicity	Not to be expected.
Carcinogenicity	No data.

NTP	IARC	ACGIH	OSHA
No.	No.	No.	No.

Mutagenicity	Not to be expected.
Reproductive toxicity	Not to be expected.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity	
Short term	Not to be expected.
Long Term	Not to be expected.
Persistence and degradability	Not readily biodegradable.
Bioaccumulative potential	Not available.
Mobility in soil	Not available.
Results of PBT and vPvB assessment	Not classified as PBT or vPvB.
Other adverse effects	None known.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods	Disposal should be in accordance with local, state or national legislation. Consult an accredited waste disposal contractor or the local authority for advice.
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SECTION 14: TRANSPORT INFORMATION

	Land transport (U.S. DOT)	Sea transport (IMDG)	Air transport (ICAO/IATA)
UN number	UN 1760 *	UN 1760	UN 1760
Proper Shipping Name	Corrosive liquid, n.o.s. (Ammonium hydrogendifluoride, 1% solution)		
Transport hazard class(es)	8	8	8
Packing group	II	II	II
Environmental hazards	No. *	No.	No.
Special precautions for user	None assigned.	None assigned.	None assigned.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable

* Contains an RQ Substance. Shipments exceeding 10,000 lbs require "RQ" designation in proper shipping name. See Section 15.

SECTION 15: REGULATORY INFORMATION

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

TSCA (Toxic Substance Control Act) - Inventory Status: All substances listed and active, or exempt.

Designated Hazardous Substances and Reportable Quantities (40 CFR 302.4):

Chemical Name	CAS No.	Typical %wt.	RQ (Pounds)
Ammonium bifluoride	1341-49-7	1	100

SARA 311/312 - Hazard Categories: See SECTION 2 - HAZARDS IDENTIFICATION

SARA 313 - Toxic Chemicals (40 CFR 372):

Chemical Name	CAS No.	Typical %wt.
None	----	----

SARA 302 - Extremely Hazardous Substances(40 CFR 355):

Chemical Name	CAS No.	Typical %wt.	TPQ (pounds)
None	----	----	----

California Proposition 65 List:

Chemical Name	CAS No.	Type of Toxicity
None	----	----

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: 1 - 16

Date of preparation: November 16, 2019

Additional Information: None

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