SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name	Sodium bifluoride 3.7% Solution
CAS number	See section 3
Synonyms	Sodium Hydrogen difluoride

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

Identified uses	Laboratory Chemicals

1.3 Details of the supplier of the safety data sheet

Company	Lab Alley, LLC 12501 Pauls Valley Road Austin, Texas 78737 U.S.A.
Telephone	512-668-9918
Fax	512-886-4008

1.4 Emergency telephone

Emergency Phone #	US & Canada: 1-800-535-5053	INFOTRAC
	International 1-352-323-3500	INFOTRAC

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Corrosive metals Category 1
Acute Oral Toxicity Category 4
Skin Corrosion/Irritation Category 1A
Serious Eye Damage/Eye Irritation Category 1

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal Word	Danger
Hazard statements	Toxic if swallowed. Causes severe skin burns and eye damage. May cause respiratory irritation. May be corrosive to metals.
Precautionary statements	Prevention: Wash face, hands, and any exposed skin thoroughly after handling. Do not eat, drink, or smoke when using this product. Avoid breathing dust/fume/gas/mist/vapors/spray. Wear protective gloves/protective clothing/eye protection/face protection. Use only outdoors or in a wellventilated area. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician. IF ON SKIN: Remove/Take off all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before re-use. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. Do NOT induce vomiting. Storage: Store in a well-ventilated place. Keep container tightly closed. Store locked up. Disposal: Dispose of contents/container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

None identified.

SECTION 3: Composition/information on ingredients

3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
Deionized Water	-	7732-18-5	96.2-96.4%
Sodium bifluoride	Sodium hydrogen difluoride	1333-83-1	3.6-3.8%

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

If inhaled Remove to fresh air. If not breathing, give artificial respiration. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.

In case of skin contac Wash off immediately with soap and plenty of water while removing all contaminatedclothes and shoes. Get immediate medical advice/attention.

In case of eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keepeye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.

If swallowed Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.

4.2 Most important symptoms and effects, both acute and delayed

Causes severe skin burns and eye damage. Irritating to respiratory system, mouth, throat, and stomach.

4.3 Indication of any immediate medical attention and special treatment needed

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media The product is nonflammable; if it is involved in a fire, extinguish the fire using an agent suitable for the type of surrounding fire.

Unsuitable extinguishing media No information available.

5.2 Specific hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors.
Hazardous Combustion Products: Hydrogen fluoride, Sodium fluoride.

5.3 Special protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

5.4 Further information

Flash Point No information available.

Autoignition Temperature No information available.

Explosion limits

Upper No information available.

Lower No information available.

Sensitivity to Mechanical Impact No information available.

Sensitivity to Static Discharge No information available.

NFPA

Health	Flammability	Instability	Physical hazards
3	0	0	N/A

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid contact with skin, eyes and clothing. Use personal protective equipment.

6.2 Environmental precautions

Prevent further leakage or spillage, if safe to do so. Prevent product from entering drains. Prevent entry into waterways, sewers, basements or confined areas.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions. Sweep up and shovel. Use appropriate tools to put the spilled material in a suitable chemical waste disposal container. Clean contaminated surface thoroughly.

6.4 Reference to other sections

See Section 2 for full list of hazard and precaution statements.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Use only in well-ventilated areas.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container.

Store away from incompatible materials. Store in a segrated and approved area.

Incompatibilities

Water, strong acids, metals, combustible materials, organic materials, and oxidizing agents.

SECTION 8: Exposure controls/personal protection

8.1 Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Component	Type	Value
Sodium hyrogen difluoride	TWA (as F)	2.5 mg/m3

US. ACGIH Threshold Limit Values

Component	Type	Value
Sodium hyrogen difluoride	TWA (as F)	2.5 mg/m3

US. NIOSH: Pocket Guide to Chemical Hazards

Component	Type	Value
Sodium hyrogen difluoride	TWA (as F)	2.5 mg/m3

Biological occupational exposure limits

Component	Parameter,value	Biological specimen	Remarks
Sodium hyrogen difluoride	Fluoride, 2 mg/l	Urine	Prior to shift (16 hours after exposure ceases)
	Fluoride, 3 mg/l		End of shift (As soon as possible after exposure ceases)

8.2 Exposure controls

Appropriate engineering controls
Ensure adequate ventilation, especially in confined areas. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits.

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
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product.

Body Protection
Wear protective clothing: long sleeved clothing, chemical resistant apron, gloves, boots.

Respiratory protection

Wear respirator with dust filter. Be sure to use an approved/certified respirator or equivalent.

Control of environmental exposure
Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Liquid
Appearance	Colorless
Odor	Characteristically Pungent
Odor Threshold	No information available
pH	1 at 0.6% w/v solution
Melting Point/Range	Not applicable
Boiling Point/Range	No information available
Evaporation Rate	No information available
Flammability (solid)	Not applicable
Flammability or explosive limit	No information available
Upper	No information available
Lower	No information available
Vapor Pressure	No information available
Vapor Density	No information available
Density	1.1 g/mL @ 25 deg C
Solubility	No information available
Partition coefficient; n-octanol/water	No information available
Autoignition Temp	No information available
Decomposition Temp	No information available
Viscosity	No information available
Molecular Formula	NaHF2 (Sodium Bifluoride)
Molecular Weight	62.00 (Sodium Bifluoride)
VOC Content(%)	No information available
Oxidizing properties	No information available

9.2 Other safety information
No information available.

SECTION 10: Stability and reactivity

10.1 Reactivity
Reacts with strong acids to form hydrogen fluoride.

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

May release toxic and/or corrosive fumes.

10.4 Conditions to avoid
Exposure to heat, incompatible materials.

10.5 Incompatible materials
Strong acids, metals, combustible materials, organic materials, oxidizing agents.

10.6 Hazardous decomposition products
Hydrogen fluoride, Sodium fluoride.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Sodium hydrogen difluoride	80 mg/kg (Rat)	-	-

Skin corrosion/irritation
Causes severe skin irritation and burns.

Serious eye damage/eye irritation
Causes severe eye damage and burns.

Respiratory or skin sensitization
Causes respiratory tract (nose, throat, lungs), and mucous membrane irritation.

Germ cell mutagenicity
No information available.

Carcinogenicity

Component	CAS	IARC	NTP	ACGIH	OSHA	Mexico
Sodium hydrogen difluoride	1333-83-1	Group 3	Not listed	A4	Not listed	Not listed

Specific target organ toxicity - single exposure
Respiratory system.

Specific target organ toxicity - repeated exposure
No information available.

Reproductive toxicity
No information available.

Chronic effects
Chronic exposure may affect the liver and kidneys.

11.2 Additional Information
No information available.

SECTION 12: Ecological information

12.1 Toxicity
The environmental impact of this product has not been fully investigated.

12.2 Persistence and degradability
No information available.

12.3 Bio accumulative potential
No information available.

12.4 Mobility in soil
No information available.

12.5 Results of PBT and vPvB assessment
No information available.

12.6 Endocrine disrupting properties
No information available.

12.7 Other adverse effects
No information available.

SECTION 13: Disposal considerations

13.1 Waste Disposal Methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

SECTION 14: Transport information

DOT (US)

UN Number	3264
Proper Shipping name	Corrosive liquid, acidic, inorganic, n.o.s
Hazard Class	8
Packaging Group	II
Technical name	Sodium bifluoride 3.7% Solution

IMDG

UN Number	3264
Proper Shipping name	Corrosive liquid, acidic, inorganic, n.o.s
Hazard Class	8
Packaging Group	II
Technical name	Sodium bifluoride 3.7% Solution

IATA

UN Number	3264
Proper Shipping name	Corrosive liquid, acidic, inorganic, n.o.s
Hazard Class	8
Packaging Group	II
Technical name	Sodium bifluoride 3.7% Solution

SECTION 15: Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not applicable.

CERCLA Hazardous Substance List (40 CFR 302.4)

Listed, Sodium hydrogen difluoride, RQ: 100 lbs.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous

Acute Health Hazard.

SARA 313 (TRI reporting)

Not regulated.

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.

Safe Drinking Water Act

Not regulated.

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Not listed.

US state regulations

US. Massachusetts RTK - Substance List

Listed

US. New Jersey Worker and Community Right-to-Know Act

Listed

US. Pennsylvania Worker and Community Right-to-Know Law

Listed

California Proposition 65

Not listed.

SECTION 16: Other information

Date of Issue: 6/2/2025

SECTION 17: Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.