SAFETY DATA SHEET

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

1.1 Product identifiers

Product name	Hydrofluoric Acid 0.5% Solution
CAS number	See section 3
Synonyms	No information available

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)

Acute Toxicity - Oral Category 3
Acute Toxicity - Dermal Category 4
Acute Toxicity - Inhalation Category 4
Respiratory Sensitizer Category 1
Skin Sensitizer Category 1

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word: Danger

Hazard statements:
H301 Toxic if swallowed.
H312 Harmful in contact with skin.
H317 May cause an allergic skin reaction.
H332 Harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Precautionary statements:
P261 Avoid breathing fumes, mist, vapors, or spray.
P264 Wash arms, hands and face thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing must not be allowed out of the workplace.
P280 Wear protective gloves and eye protection.
P285 In case of inadequate ventilation wear respiratory protection.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or physician.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P304+P341 IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
P312 Call a POISON CENTER or physician if you feel unwell.
P321 Specific treatment (Treat with calcium gluconate gel).
P330 Rinse mouth.
P332+P313 If skin irritation occurs: Get medical attention.
P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER or physician.
P362 Take off contaminated clothing and wash it before reuse.
P363 Wash contaminated clothing before reuse.
P405 Store locked up.
P501 Dispose of contents in accordance with local, state, federal and international regulations.

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
Hydrofluoric Acid	-	7664-39-3	0.50%
Water	-	7732-18-5	99.50%

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice Show this sheet to a doctor if medical advice is needed.

If inhaled IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.

In case of skin contact IF ON SKIN: Wash with plenty of soap and water. May cause irritation, redness, and pain.

In case of eye contact No information available.

If swallowed IF SWALLOWED: Immediately call a POISON CENTER or physician. Dilute with water or milk. Do not induce vomiting. Call a physician if necessary.

4.2 Most important symptoms and effects, both acute and delayed

Toxic if swallowed. Harmful in contact with skin. May cause an allergic skin reaction. Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. CAUTION! This reagent is slightly corrosive and toxic. Avoid ingestion or contact with eyes or skin. Wash areas of contact with plenty of water. May cause burns which may not be immediately noticeable. EYE CONTACT: May cause irritation, redness, pain, and tearing. SKIN CONTACT: May cause irritation, redness, and pain.

4.3 Indication of any immediate medical attention and special treatment needed

Specific treatment (Treat with calcium gluconate gel).

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media Use any means suitable for extinguishing surrounding fire.

Unsuitable extinguishing media None identified.

5.2 Specific hazards arising from the substance or mixture

Not considered to be a fire or explosion hazard.

5.3 Special protective equipment and precautions for firefighters

Use protective clothing and breathing equipment appropriate for the surrounding fire.

5.4 Further information

Flash Point No information available.

Autoignition Temperature No information available.

Explosion limits

Upper No data available.
Lower No data available.

Sensitivity to Mechanical Impact No information available.

Sensitivity to Static Discharge No information available.

NFPA

Health	Flammability	Instability	Physical hazards
1	0	0	N/A

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear protective gloves and eye protection. In case of inadequate ventilation wear respiratory protection.

6.2 Environmental precautions

No information available.

6.3 Methods and materials for containment and cleaning up

Cover the spill with Sodium Carbonate or a soda ash-slaked lime mixture (50:50). Mix and add water to form slurry. Decant the liquid to the drain with excess water. Treat the solid residue as normal refuse. Wash site with soda ash solution. Always dispose of in accordance with local regulations.

6.4 Reference to other sections

Refer to protective measures listed in Sections 7 and 8. See section 13 for proper disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Wear personal protective equipment. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Store locked up.

Incompatibilities

Protect from freezing and physical damage.

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
Hydrogen Fluoride	TWA	3 ppm; 2.5 mg/m3

US. ACGIH Threshold Limit Values

Component	Type	Value
Hydrogen Fluoride	TWA	0.5 ppm
Hydrogen Fluoride	Ceiling	2 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Component	Type	Value
Hydrogen Fluoride	TWA	3 ppm

Biological occupational exposure limits

No information available.

8.2 Exposure controls

Appropriate engineering controls

Use only outdoors or in a well-ventilated area. No specific controls are needed. Normal room ventilation is adequate.

Personal protective equipment

Eye/face protection

Wear eye protection. Safety glasses or goggles.

Skin protection

Wear protective gloves. Chemical resistant gloves.

Body Protection

Wear appropriate protective work clothing.

Respiratory protection

In case of inadequate ventilation wear respiratory protection. Normal room ventilation is adequate.

Control of environmental exposure

Handle in accordance with good industrial hygiene and safety practice.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Liquid
Appearance	Colorless
Odor	No data available
Odor Threshold	No data available
pH	No data available
Melting Point/Range	Approximately 0°C
Boiling Point/Range	Approximately 100°C - Approximately 100°C
Evaporation Rate	No data available
Flammability (solid)	No data available
Flammability or explosive limit	
Upper	No data available
Lower	No data available
Vapor Pressure	No information available
Vapor Density	No information available
Density	1
Solubility	Miscible in water
Partition coefficient; n-octanol/water	No data available
Autoignition Temp	No data available
Decomposition Temp	No data available
Viscosity	No data available
Molecular Formula	No data available
Molecular Weight	No data available
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

No information available.

10.2 Chemical stability

No information available.

10.3 Possibility of hazardous reactions

Will not occur.

10.4 Conditions to avoid

Protect from freezing and physical damage.

10.5 Incompatible materials

None identified.

10.6 Hazardous decomposition products

No information available.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Hydrogen Fluoride	-	-	Rat: 1276 ppm/1 H

Skin corrosion/irritation

No data available.

Serious eye damage/eye irritation

No data available.

Respiratory or skin sensitization

May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. Avoid breathing fumes, mist, vapors, or spray. In case of inadequate ventilation wear respiratory protection. Wear protective gloves and eye protection.

Germ cell mutagenicity

No data available.

Carcinogenicity

No data available.

Specific target organ toxicity - single exposure

No data available.

Specific target organ toxicity - repeated exposure

No data available.

Reproductive toxicity
No data available.

Chronic effects
No data available.

11.2 Additional Information
No data available.

SECTION 12: Ecological information

12.1 Toxicity
No data available.

12.2 Persistence and degradability
No data available.

12.3 Bio accumulative potential
No data available.

12.4 Mobility in soil
No data available.

12.5 Results of PBT and vPvB assessment
No data available.

12.6 Endocrine disrupting properties
No data available.

12.7 Other adverse effects
No data 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	UN1790

Proper Shipping name	Hydrofluoric Acid
Hazard Class	8, 6.1
Packaging Group	II

IMDG

UN Number	UN1790
Proper Shipping name	Hydrofluoric Acid
Hazard Class	8, 6.1
Packaging Group	II

IATA

UN Number	UN1790
Proper Shipping name	Hydrofluoric Acid
Hazard Class	8, 6.1
Packaging Group	II

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 listed.

CERCLA Hazardous Substance List (40 CFR 302.4)
Hydrofluoric Acid (CAS # 7664-39-3): 100 lb RQ

SARA 304 Emergency release notification
Hydrofluoric Acid (CAS # 7664-39-3): 100 lb RQ

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)
Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance
Hydrofluoric Acid (CAS # 7664-39-3): 100 lb RQ

SARA 311/312 Hazardous
Hydrofluoric Acid (CAS # 7664-39-3): 100 lb final RQ; 45.4 kg final RQ

SARA 313 (TRI reporting)
Hydrofluoric Acid (CAS # 7664-39-3): 1.0 % de minimis concentration

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not listed.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not listed.

Safe Drinking Water Act
Hydrofluoric Acid (CAS # 7664-39-3): 100,000 lb RQ

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace
Not listed.

US state regulations

US. Massachusetts RTK - Substance List
Hydrofluoric Acid (CAS # 7664-39-3): Extraordinarily hazardous

US. New Jersey Worker and Community Right-to-Know Act
Hydrofluoric Acid (CAS # 7664-39-3): corrosive
Hydrofluoric Acid (CAS # 7664-39-3): sn 0936
Hydrofluoric Acid (CAS # 7664-39-3): sn 3759
Hydrofluoric Acid (CAS # 7664-39-3): SN 3759 100 lb TPQ; SN 1014 500 lb TPQ (Hydrogen fluoride gas only)

US. Pennsylvania Worker and Community Right-to-Know Law
Hydrofluoric Acid (CAS # 7664-39-3): Environmental hazard
Water (CAS # 7732-18-5): Present

California Proposition 65
Not listed.

SECTION 16: Other information

Date of Issue: 6/12/2025
Revision Date: 11/3/2026

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.