

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Hydrofluorosilicic Acid 23% ACS

Synonyms: Hydrofluorosilicic Acid

CAS Number: 16961-83-4

Grade/Purity: ACS Reagent Grade

Product Type: Acids

Product Use: Industrial, Manufacturing or Laboratory use

Manufacturer/Supplier: Alliance Chemical, 204 South Edmond St, Taylor, Texas 76574

Information: 512-365-6838 | www.alliancechemical.com

Emergency: CHEMTEL - 800-255-3924 (24 Hours/Day, 7 Days/Week)

2. HAZARDS IDENTIFICATION

Signal Word: Danger

GHS Pictograms:



Hazard Statements:

H314	Causes severe skin burns and eye damage [Danger Skin corrosion/irritation]
H301	Toxic if swallowed

Precautionary Statements:

P260,	P264, P280, P301+P330+P331, P302+P361+P354, P304+P340, P305+P354+P338, P316, P321, P363, P405, and P501
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3. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	% MIN	% MAX	CAS #	EINECS# / ELINCS#	FORMULA	MOLECULAR WEIGHT
Hydrofluorosilicic Acid	23% w/w	23% w/w	16961-83-4	241-034-8	F ₆ H ₂ Si	144.091 g/mol
Water	77	77	7732-18-5	231-791-2	H ₂ O	18.02 g/mol

4. FIRST-AID MEASURES

Eyes	EYES: immediately wash with water for 15 min.; call a physician.
Skin	Remove contaminated clothes. Rinse skin with plenty of water or shower. Refer immediately for medical attention.
Inhalation	INHALATION: remove victim to fresh air; get medical attention.
Ingestion	INGESTION: give large amounts of water; do NOT induce vomiting.

5. FIRE-FIGHTING MEASURES

Suitable Media	Dry chemical, CO ₂ , water spray. Use water spray to cool containers.
Unsuitable Media	Do not use a solid water stream as it may scatter and spread fire.
Protective Equipment	Wear self-contained breathing apparatus and full protective clothing.
Combustion Products	May include carbon oxides and other toxic fumes. See Section 10.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Use PPE as described in Section 8. Ensure adequate ventilation. Evacuate personnel to safe areas.
Environmental	Prevent leakage or spillage from entering drains, sewers, or waterways.
Containment & Cleanup	Absorb with inert material. Collect in appropriate waste container. Dispose per applicable regulations.

7. HANDLING AND STORAGE

Safe Handling	Use with adequate ventilation. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Keep container closed when not in use.
Safe Storage	Store in a cool, dry, well-ventilated area. Use corrosion-resistant containers. Keep away from incompatible materials (see Section 10). Keep containers tightly closed.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Use adequate ventilation. Provide eyewash stations and quick-drench showers accessible to areas of use.

Occupational Exposure Limits:

No established occupational exposure limits.

Eyes	Wear chemical safety goggles or face shield.
Skin	Wear chemical-resistant gloves and protective clothing.
Inhalation	For mist or aerosol applications (e.g., spray, atomization, pressure washing), use a NIOSH-approved half-face air-purifying respirator with combination acid gas / P100 cartridges. For dust exposure, an N95 or P100 particulate filter is acceptable. Ensure local exhaust ventilation.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear, colorless liquid
Odor	Characteristic
Median Particle Size	Not Applicable
Particle Size Distribution	Not Applicable
Particle Shape	Not Applicable
Surface Area	Not Applicable
Dustiness	Not Applicable
Hygroscopicity	Not Applicable
pH	Not Available
Melting Point	Not characterized for the solution
Boiling Point	Not characterized for the solution
Flash Point	Not Available
Vapor Pressure	Not Available
Specific Gravity	1.19
Solubility	Miscible with water
Molecular Formula	F_6H_2Si
Molecular Weight	144.091 g/mol

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under recommended storage conditions.
Hazardous Reactions	None under normal processing conditions.
Conditions to Avoid	Heat, sparks, open flame, and incompatible materials.

Incompatible Materials	Strong acids, strong bases, reactive metals, water (for some concentrated forms).
Decomposition Products	May produce carbon oxides and other toxic fumes when heated to decomposition.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity: See Section 2 for GHS hazard classification.

IARC	Not listed as carcinogen.
NTP	Not listed as carcinogen.
OSHA	Not listed as carcinogen.

12. ECOLOGICAL INFORMATION

Ecotoxicity	Data not available. Avoid release to the environment.
Persistence	Hydrolyzes in water to fluoride + silica; aquatic toxicity pH/fluoride-driven (corrosive, pH 1.5–2.0)
Bioaccumulation	Not Available
Mobility in Soil	Complete water solubility; dissociates

13. DISPOSAL CONSIDERATIONS

Dispose of contents/container in accordance with applicable federal, state, and local regulations. Do not dispose of into drains or waterways.

14. TRANSPORT INFORMATION

US DOT	UN1778, Fluorosilicic acid, 8 (6.1), PG II
IMDG	UN1778, Fluorosilicic acid, 8 (6.1), PG II
IATA/ICAO	UN1778, Fluorosilicic acid, 8 (6.1), PG II
Marine Pollutant	No

15. REGULATORY INFORMATION

Regulatory listings not yet on file in this system; consult OSHA, EPA TSCA, EPCRA TRI, and California OEHHA directly.	
SARA 311/312	See Section 2 for hazard classifications.

16. OTHER INFORMATION

Revision Date: 07/01/2026

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