



Aqua Chemical Supply, Inc.

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1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier: HYDROFLUOSILICIC ACID SOLUTION

Manufacturer/Supplier/Distributor

Univar Canada Ltd.
9800 Van Horne Way
Richmond, BC V6X 1W5

Emergency telephone number: For emergency assistance involving chemicals call
CHEMTREC day or night at: 1-800-424-9300

2. HAZARDS IDENTIFICATION

Hazard classification

Health hazards

Acute toxicity (Oral)

Category 4

Skin corrosion/irritation

Category 1A Serious eye damage/eye irritation

Category 1

Label elements

Hazard symbol



Signal word

Danger

Hazard statement

Corrosive.

Harmful if swallowed. Harmful if inhaled.

Causes severe skin burns and eye damage.

May cause irritation to the respiratory system.

Precautionary statement

Prevention Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Do not breathe dust or mists. Wear protective gloves/protective clothing/eye protection/face protection.

Response

IF INHALED: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. IF SWALLOWED: Call a POISON CENTER/doctor/ if you feel unwell. Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor. Specific treatment (see this label). Wash contaminated clothing before reuse.

Storage

Keep container tightly closed. Store in a well-ventilated place. Store locked up.

Disposal

Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Other hazards which do not result in GHS classification

None.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical identity	CAS number	Content in percent (%)*
Silicate(2-), hexafluoro-,hydrogen (1:2)	16961-83-4	85 - 95%
Hydrofluoric acid	7664-39-3	15 - 25%
Water	7732-18-5	0 - 5%

Composition comments: All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. FIRST AID MEASURES

Ingestion: Do NOT induce vomiting. Never give liquid to an unconscious person. Get medical attention immediately.

Inhalation: Move to fresh air. If breathing is difficult, give oxygen. Perform artificial respiration if breathing has stopped.

Skin contact: Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention.

Eye contact: If in eyes, hold eyes open, flood with water for at least 15 minutes and see a doctor.

Most important symptoms/effects, acute and delayed

Symptoms: No data available.

Indication of immediate medical attention and special treatment needed

Treatment: No data available.

5. FIRE FIGHTING MEASURES

General fire hazards: No data available.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media: No data available.

Specific hazards arising from the chemical: No data available.

Special firefighting procedures:

Special protective equipment for fire-fighters: No data available.

Special protective equipment and precautions for firefighters: No data available.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: No data available.

Methods and material for containment and cleaning up: Absorb spillage with non-combustible, absorbent material.

Dike for later disposal.

7. HANDLING AND STORAGE

Precautions for safe handling: Avoid breathing mists or vapors. Do not get in eyes, on skin, on clothing. Use only with adequate ventilation. Store away from incompatible materials.

Conditions for safe storage, including any incompatibilities: No data available.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical identity	Type	Exposure Limit values	Source
Silicate(2-), hexafluoro-, hydrogen (1:2) - as F	TWA	2.5 mg/m ³	US. ACGIH Threshold Limit Values (03 2013)
	REL	2.5 mg/m ³	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	PEL	2.5 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	2.5 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989) Silicate(2-),
hexafluoro-, hydrogen (1:2) - Dust.	TWA	2.5 mg/m ³	US. OSHA Table Z-2 (29 CFR 1910.1000) (02 2006)
Silicate(2-), hexafluoro-, hydrogen (1:2) - as F	TWA	2.5 mg/m ³	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
Silicate(2-), hexafluoro-, hydrogen (1:2)	ST ESL	17 µg/m ³	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (022013)
	ST ESL	21 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (02 2013)
	ST ESL	22 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (02 2013)

	AN ESL	8.1 µg/m ³	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (02 2013)
	AN ESL	8.7 µg/m ³	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (02 2013)
	AN ESL	0.71 µg/m ³	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (02 2013)
	AN ESL	0.75 µg/m ³	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (02 2013)
	AN ESL	11 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (02 2013)
	AN ESL	0.87 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (02 2013)
	AN ESL	0.91 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (02 2013)
	AN ESL	9.9 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (02 2013)
	ST ESL	18 µg/m ³	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (02 2013)
	ST ESL	2.8 µg/m ³	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (02 2013)
	ST ESL	3.4 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (02 2013)
	AN ESL	0.7 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (02 2013)
	AN ESL	0.57 µg/m ³	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (02 2013)
Silicate(2-), hexafluoro- , hydrogen (1:2) - as F	TWA PEL	2.5 mg/m ³	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (02 2012)
Hydrofluoric acid - as F	TWA	0.5 ppm	US. ACGIH Threshold Limit Values (03 2013)
Hydrofluoric acid	Ceiling	2 ppm	US. ACGIH Threshold Limit Values(032013)
	REL	3 ppm	2.5 mg/m ³ US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	Ceil_Time	6 ppm 5 mg/m ³	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
Hydrofluoric acid - as F	PEL	2.5 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	3 ppm	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	STEL	6 ppm	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
Hydrofluoric acid	TWA	3 ppm	US. OSHA Table Z-2 (29 CFR 1910.1000) (02 2006)
Hydrofluoric acid - as F	STEL	6 ppm	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	TWA	3 ppm	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008) Hydrofluoric acid
ST ESL	22 ppb		US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (02 2013)
	AN ESL	8.7 µg/m ³	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (02 2013)
	AN ESL	11 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (02 2013)
	AN ESL	0.91 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (02 2013)
	ST ESL	18 µg/m ³	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (02 2013)

	AN ESL 0.75 µg/m ³	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (02 2013)
	ST ESL 3 µg/m ³	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (02 2013)
	ST ESL 3.7 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (02 2013)
	AN ESL 0.6 µg/m ³	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (02 2013)
	AN ESL 0.73 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (02 2013)
Hydrofluoric acid - as F	TWA PEL 0.4 ppm	0.33 mg/m ³ US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (02 2012)
	STEL 1 ppm	0.83 mg/m ³ US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (02 2012)
Biological limit values		
Chemical identity	Exposure Limit values	Source
Silicate(2-),hexafluoro-, hydrogen (1:2) (Fluoride: Sampling time: Prior to shift.)	2 mg/l (Urine)	ACGIH BEL (03 2013)
Silicate(2-),hexafluoro-, hydrogen (1:2) (Fluoride: Sampling time: End of shift.)	3 mg/l (Urine)	ACGIH BEL (03 2013)
Hydrofluoric acid (Fluoride: Sampling time: Prior to shift.)	2 mg/l (Urine)	ACGIH BEL (03 2013)
Hydrofluoric acid (Fluoride: Sampling time: End of shift.)	3 mg/l (Urine)	ACGIH BEL (03 2013)
Appropriate engineering controls	No data available.	
Individual protection measures, such as personal protective equipment	No data available.	
General information:	No data available.	
Eye/face protection:	No data available.	
Skin protection	No data available.	
Hand protection:	No data available.	
Other:	No data available.	
Respiratory protection:	No data available.	
Hygiene measures:	No data available.	
9. PHYSICAL AND CHEMICAL PROPERTIES		
Physical state:	Liquid	
Form:	No data available.	
Color:	No data available.	
Odor:	No data available.	
Odor threshold:	No data available.	
pH:	1	
Melting point/freezing point:	No data available.	
Initial boiling point and boiling range:	18 - 100 °C	
Flash Point:	No data available.	
Evaporation rate:	No data available.	
Flammability (solid, gas):	No data available.	
Upper/lower limit on flammability or explosive limits		
Flammability limit - upper (%):	No data available.	
Flammability limit - lower (%):	No data available.	
Explosive limit - upper (%):	No data available.	
Explosive limit - lower (%):	No data available.	
Vapor pressure:	No data available.	
Vapor density:	No data available.	
Relative density:	No data available.	
Solubility(ies)		
Solubility in water:	No data available.	
Solubility (other):	No data available.	

Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.

10. STABILITY AND REACTIVITY

Reactivity:	No data available.
Chemical stability:	No data available.
Possibility of hazardous reactions:	No data available.
Conditions to avoid:	No data available.
Incompatible materials:	No data available.
Hazardous decomposition products:	No data available.

11. TOXICOLOGICAL INFORMATION

Symptoms related to the physical, chemical and toxicological characteristics

Ingestion:	No data available.
Inhalation:	No data available.
Skin contact:	No data available.
Eye contact:	No data available.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral

Product: ATEmix(): 452.631579 mg/kg

Dermal

Product: No data available.

Inhalation

Product: No data available.

Specified substance(s):

Hydrofluoric acid LC 50 (Monkey, 1 h): 1,780 mg/l

Repeated dose toxicity

Product: No data available.

Skin corrosion/irritation

Product: No data available.

Serious eye damage/eye irritation

Product: No data available.

Respiratory or skin sensitization

Product: No data available.

Carcinogenicity

Product: No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:

No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):

No carcinogenic components identified

Germ cell mutagenicity

In vitro

Product: No data available.

In vivo

Product: No data available.

Reproductive toxicity

Product: No data available.

Specific target organ toxicity - single exposure

Product: No data available.

Specific target organ toxicity - repeated exposure

Product: No data available.

Aspiration hazard Product: No data available.

Other effects: No data available.

12. ECOLOGICAL INFORMATION

Ecotoxicity:
 Acute hazards to the aquatic environment:
 Fish
 Product: No data available.
 Aquatic invertebrates
 Product: No data available.
 Chronic hazards to the aquatic environment: Fish
 Product: No data available.
 Aquatic invertebrates
 Product: No data available.
 Toxicity to Aquatic Plants
 Product: No data available.
 Persistence and degradability
 Biodegradation
 Product: No data available.
 BOD/COD ratio
 Product: No data available.
 Bioaccumulative potential
 Bioconcentration factor (BCF)
 Product: No data available.
 Partition coefficient n-octanol / water (log Kow)
 Product: No data available.
 Mobility in soil: No data available.
 Known or predicted distribution to environmental compartments
 Hexafluorosilicic acid No data available.
 Hydrogen fluoride No data available.
 Water No data available.
 Known or predicted distribution to environmental compartments
 Water No data available.

13. DISPOSAL CONSIDERATION

Disposal instructions: No data available.
 Contaminated packaging: No data available.

14. TRANSPORT INFORMATION

DOT
 UN number: UN 1778
 UN proper shipping name: FLUOROSILICIC ACID
 Transport hazard class(es)
 Class: 8
 Label(s): 8
 Packing group: II
 Marine Pollutant: Not regulated.
 Special precautions for user: –
 IMDG
 UN number: UN 1778
 UN proper shipping name: FLUOROSILICIC ACID
 Transport hazard class(es)
 Class: 8
 Label(s): 8
 EmS No.: F-A, S-B
 Packing group: II
 Marine Pollutant: Not regulated.
 Special precautions for user: –
 IATA
 UN number: UN 1778
 Proper Shipping Name: FLUOROSILICIC ACID

Transport hazard class(es):	
Class:	8
Label(s):	8
Packing group:	II
Environmental hazards	Not regulated.
Special precautions for user:	-
Other information	
Passenger and cargo aircraft:	Allowed.
Cargo aircraft only:	Allowed.

15. REGULATORY INFORMATION

US federal regulations US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
 None present or none present in regulated quantities.
 CERCLA Hazardous Substance List (40 CFR 302.4):
 Hydrofluoric acid Reportable quantity: 100 lbs.
 Superfund amendments and reauthorization act of 1986 (SARA) Hazard categories
 Not listed.
 SARA 302 Extremely hazardous substance

Chemical identity	RQ	Threshold Planning Quantity
Hydrofluoric acid	100 lbs.	100 lbs.

SARA 304 Emergency release notification

Chemical identity	RQ
Hydrofluoric acid	100 lbs.

SARA 311/312 Hazardous chemical

Chemical identity	Threshold Planning Quantity
Hydrofluoric acid	100lbs
Silicate(2-), hexafluoro-, hydrogen (1:2)	500 lbs

SARA 313 (TRI reporting)

Chemical identity	Reporting threshold for other users	Reporting threshold for manufacturing and processing
Hydrofluoric acid	10000 lbs	25000 lbs.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)
 Hydrofluoric acid Reportable quantity: 100 lbs.
 Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):
 Hydrofluoric acid Threshold quantity: 1000 lbs
 US state regulations
 US. California Proposition 65 No ingredient regulated by CA Prop 65 present.
 US. New Jersey Worker and Community Right-to-Know Act
 Silicate(2-), hexafluoro-, hydrogen (1:2) Listed
 Hydrofluoric acid Listed
 US. Massachusetts RTK - Substance List
 Silicate(2-), hexafluoro-, hydrogen (1:2) Listed
 Hydrofluoric acid Listed
 US. Pennsylvania RTK - Hazardous Substances
 Silicate(2-), hexafluoro-, hydrogen (1:2) Listed
 Hydrofluoric acid Listed
 US. Rhode Island RTK
 Hydrofluoric acid Listed
 Inventory Status:
 Australia AICS: Not in compliance with the inventory.
 Canada DSL Inventory List: Not in compliance with the inventory.
 EU EINECS List: On or in compliance with the inventory
 EU ELINCS List: Not in compliance with the inventory.
 Japan (ENCS) List: Not in compliance with the inventory.
 EU No Longer Polymers List: Not in compliance with the inventory.
 China Inv. Existing Chemical Substances: Not in compliance with the inventory.
 Korea Existing Chemicals Inv. (KECI): Not in compliance with the inventory.

Canada NDSL Inventory:	Not in compliance with the inventory.
Philippines PICCS:	Not in compliance with the inventory.
US TSCA Inventory:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	Not in compliance with the inventory.
Japan ISHL Listing:	Not in compliance with the inventory.
Japan Pharmacopoeia Listing:	Not in compliance with the inventory.

16. OTHER INFORMATION

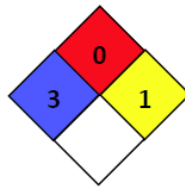
HMIS Hazard ID

Health	3
Flammability	0
Physical hazards	0
PERSONAL PROTECTION	B

B - Safety Glasses & Gloves

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; *Chronic health effect

NFPA Hazard ID



	Flammability
	Health
	Reactivity
	Special hazard.

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

Notice

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Do not use ingredient information and/or ingredient percentages in this SDS as a product specification. For product specification information refer to a product specification sheet and/or a certificate of analysis. These can be obtained from your local Aqua Chemical Supply, Inc. sales office.

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