



**Southeast Florida Governmental Purchasing
Cooperative Group**

CONTRACT AWARD

Please complete each of the applicable boxes and submit with bid documents, award notices and tabulations to lpiper@myboca.us for placement on the NIGP SEFL website Cooperative contract page.

BID/RFP No. _____

Description/Title: _____

Initial Contract Term: Start Date: _____ End Date: _____

Renewal Terms of the Contract: _____ Renewal Options for _____
(No. of Renewals) (Period of Time)

Renewal No. ____ Start Date: _____ End Date: _____

Renewal No. ____ Start Date: _____ End Date: _____

Renewal No. ____ Start Date: _____ End Date: _____

SECTION #1 VENDOR AWARD

Vendor Name: _____

Vendor Address: _____

Contact: _____

Phone: _____ Fax: _____

Cell/Pager: _____ Email Address: _____

Website: _____ FEIN: _____

SECTION #2 AWARD/BACKGROUND INFORMATION

Award Date: _____ Resolution/Agenda Item No.: _____

Insurance Required: Yes _____ No _____

Performance Bond Required: Yes _____ No _____

SECTION #3 LEAD AGENCY

Agency Name: _____

Agency Address: _____

Agency Contact: _____ Email _____

Telephone: _____ Fax: _____

COMMODITIES CONTRACT AWARD

CITY OF FORT LAUDERDALE
PROCUREMENT SERVICES DIVISION

Contract Name
HYDROFLUOSILICIC ACID (CO-OP)

Contract No.	Initial Period Covered	Master Blanket No.
12595-322	2/22/2022 – 2/21/2023	222676

Awarded Vendor:	Terms:
<p>DuBois Chemicals, Inc. 1717 E. Fargo Avenue Nampa, ID 83687</p> <p>Attn: Betty Kendall-Jones Tel: 385-549-0086 Email: Betty.Kendall-Jones@duboischemicals.com</p>	<p>P-Card Accepted? Yes</p>

Insurance Coverage Required:	Yes
Authorized Purchases:	\$88,164.00
Approved by City Commission:	Non-Agenda
Extension Options:	Yes Qty 3 / 1 -Yr Extensions

ITEMS:

Full Truck Loads, One Stop \$0.2844 / Pound

Less Than Full Truck Loads, Regardless of Number of Stops.....\$0.4478 / Pound

Demurrage Rate \$125.00 / Hour

NOTE: Dubois Chemicals, Inc. noted that its prices are based on a 23% quantity adjusted basis and bulk loads a minimum of 44,000/lbs. (22 tons) and LTL loads a minimum of 20,000/lbs. (10 tons). All this means is that invoice will reflect an alternative method of invoicing known as the quantity adjusted method. This method reflects the fixed bid price, but the quantity received is adjusted to reflect the actual assay or concentration of Fluorosilicic Acid to the water treatment plan.

Department Contract Coordinator: Cesar Alza, 954-828-7865

Procurement Specialist: Stefan Mohammed, 954-828-5351

Approved by

Glen Marcos, CPPO, CPPB, FCPM, FCPA

Chief Procurement Officer/Assistant Finance Director- Procurement and Contracts

**Bid Tabulation Packet
for
Solicitation 12595-322**

Hydrofluosilicic Acid (Co-Op)

Bid Designation: Public



City of Fort Lauderdale

Bid #12595-322 - Hydrofluosilicic Acid (Co-Op)

Creation Date **Nov 22, 2021**

End Date **Dec 8, 2021 2:00:00 PM EST**

Start Date **Nov 22, 2021 4:36:09 PM EST**


Awarded Date **Not Yet Awarded**

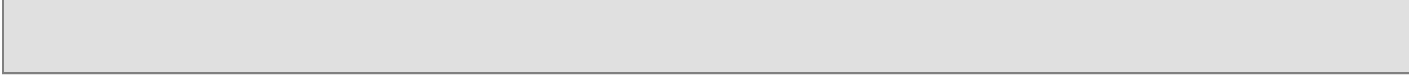
12595-322--01-01 Full Truck Loads, One Stop					
Supplier	Unit Price	Qty/Unit	Total Price	Attch.	Docs
DUBOIS CHEMICALS, INC.,	First Offer - \$0.2844	1 / pound	\$0.2844	Y	Y
Product Code: Agency Notes:		Supplier Product Code: Supplier Notes: Our unit price is \$0.2844/LB and not the rounded price of \$0.28/LB.			

12595-322--01-02 Less than full truck loads, regardless of the number of stops.					
Supplier	Unit Price	Qty/Unit	Total Price	Attch.	Docs
DUBOIS CHEMICALS, INC.,	First Offer - \$0.4478	1 / pound	\$0.4478	Y	Y
Product Code: Agency Notes:		Supplier Product Code: Supplier Notes: Our unit price is \$0.4478/LB and not the rounded price of \$0.45/LB			

12595-322--01-03 Demurrage Rate					
Supplier	Unit Price	Qty/Unit	Total Price	Attch.	Docs
DUBOIS CHEMICALS, INC.,	First Offer - \$125.00	1 / hour	\$125.00		Y
Product Code: Agency Notes:		Supplier Product Code: Supplier Notes: There will be a charge of \$125.00 per hour after the initial 2 hour unloading.			

Supplier Totals

f DUBOIS CHEMICALS, INC.,		\$125.7322 (3/3 items)
Bid Contact Betty Kendall-Jones Betty.Kendall-Jones@duboischemicals.com Ph 385-549-0086	Address NAMPA, ID 83687	
Bid Notes Note: Our prices are based on a 23% quantity adjusted basis and Bulk loads a minimum of 44,000/lbs (22 tons) and LTL loads a minimum of 20,000/LBS (10 tons)		
Agency Notes:	Supplier Notes: Note: Our prices are based on a 23% quantity adjusted basis and Bulk loads a minimum of 44,000/lbs (22 tons) and LTL loads a minimum of 20,000/LBS (10 tons)	Head Attch: 



**

DUBOIS CHEMICALS, INC.,

Bid Contact **Betty Kendall-Jones**

Address **NAMPA, ID 83687**

Betty.Kendall-Jones@duboischemicals.com

Ph 385-549-0086

Bid Notes **Note: Our prices are based on a 23% quantity adjusted basis and Bulk loads a minimum of 44,000/lbs (22 tons) and LTL loads a minimum of 20,000/LBS (10 tons)**

Item #	Line Item	Notes	Unit Price	Qty/Unit	Attch.	Docs
12595-322--01-01	Full Truck Loads, One Stop	Supplier Product Code: Supplier Notes: Our unit price is \$0.2844/LB and not the rounded price of \$0.28/LB.	First Offer - \$0.2844	1 / pound	\$0.2844	Y Y
12595-322--01-02	Less than full truck loads, regardless of the number of stops.	Supplier Product Code: Supplier Notes: Our unit price is \$0.4478/LB and not the rounded price of \$0.45/LB	First Offer - \$0.4478	1 / pound	\$0.4478	Y Y
12595-322--01-03	Demurrage Rate	Supplier Product Code: Supplier Notes: There will be a charge of \$125.00 per hour after the initial 2 hour unloading.	First Offer - \$125.00	1 / hour	\$125.00	Y

Supplier Total **\$125.7322**

DUBOIS CHEMICALS, INC.,

Item: **Full Truck Loads, One Stop**

Attachments

SEFLGCPG - FL Co-Op - FSA - Bid Attachments - 20211208.pdf



December 7, 2021

City of Ft. Lauderdale - SEFLGPG

Re: Bid 12595-322 Hydrofluosilicic Acid (Co-Op)

Dear Co-Op Team,

DuBois Chemicals, Inc, formally operating as BHS Marketing, LLC d.b.a. BHS Specialty Chemicals is in receipt of the above bid, due December 8.

We are pleased to quote on your requirements and have done so on the BidSync web site.

Should DuBois' offer be accepted I have also included contact information for placing orders as well as my contact information for any future bid or contract related issues or questions.

DuBois Chemicals appreciated the opportunity to bid and looks forward to hearing the results of your chemical requirement bid. Please feel free to contact Laura Lanthier or myself should you have any questions.

Sincerely,

A handwritten signature in blue ink that reads 'Betty K. Jones'.

Betty Kendall-Jones
Municipal Bid Specialist
PH: 385.549.0086
Email: Betty.Kendall-Jones@duboischchemicals.com

Bid Department: 1717 E. Fargo Ave., Nampa, ID 83687
DuBois Chemicals ▪ 3630 East Kemper Road ▪ Sharonville, OH ▪
45241-2011 800 438 2647 ▪ www.duboischchemicals.com



Company Information 2022

Company Name: DuBois Chemicals, Inc.

Company Corporate Address: 3630 E. Kemper Rd.
Cincinnati, OH 45241

Phone Number: 1-800-438-2647

Fax Number: 1-800-543-1720

Federal Tax ID#: 80-0244824

State of Formation: Delaware

Payment Remit to Address: DuBois Chemicals, Inc.
2659 SOLUTION CENTER
CHICAGO, IL 60677-2066

Bids & Contracts: Mailing Address:
1717 E Fargo Ave
Nampa, ID 83687

Group Email:
bids@duboischchemicals.com

Laura Lanthier
Manager, Municipal Bids & Contracts
Phone: 208-932-6615
Email: laura.lanthier@duboischchemicals.com

Betty Kendall-Jones
Municipal Bid Specialist
Phone: 385-549-0086
Email: Betty.Kendall-Jones@duboischchemicals.com

<p><u>Fluorosilicic Acid Order Placement:</u> Email: FSA@duboischchemicals.com</p> <p>Customer Service Veronica Childers Direct Line: 208-541-2812 Office: 208-466-8437 Fax: 208-466-8989 Veronica.Childers@duboischchemicals.com</p> <p>Alternate Contact: John Wiemer Direct Line: 208-830-1436 John.Wiemer@duboischchemicals.com</p>	<p><u>Soda Ash and Other Chemical Order Placement:</u> Email: BHS_orders@duboischchemicals.com and CS@duboischchemicals.com</p> <p>Toll Free: (800) 999-8233 Fax: (801) 973-8838 Customer Service Direct Line: 801-973-8232 Email: gia.frederick@duboischchemicals.com</p>
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Bid Department • 1717 E Fargo Ave • Nampa, ID 83687 • bids@duboischchemicals.com
DuBois Corporate Office • 3630 East Kemper Road • Cincinnati, OH 45241
Phone: 800.438.2647 • Fax: 513-326-8320 • www.duboischchemicals.com



WRITTEN CONSENT OF DUBOIS CHEMICALS, INC.
{THE "CORPORATION"}

The undersigned, constituting Chief Executive Officer who has been authorized by the Board of Directors of DuBois Chemicals, Inc. to sign, adopt and consent on behalf of the Board of Directors to the following action and resolution:

1. DuBois employment of Laura Lanthier, Manager Bids and Contracts of the Corporation and Betty Kendall-Jones, Municipal Bids Specialist.
2. Laura Lanthier and Betty Kendall-Jones are authorized to execute, for and on behalf of this Corporation, all bid documents and instruments as may be necessary to complete and enter into Governmental Contracts or Agreements.



Jeff W. Welsh
President and CEO

March 26, 2018
Date

3630 East Kemper Road • Cincinnati, OH 45241
Phone: 800.438.2647 • Fax: 513 -326 -8320 • www.duboischemicals.com



Fluorosilicic Acid (FSA)

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 03/25/2021 Version: 1.0

SECTION 1: Identification

1.1. Identification

Product form : Substance
 Substance name : Fluorosilicic Acid (FSA)
 Chemical name : Hydro Fluorosilicic Acid (HSA)
 Product code : M17200

1.2. Recommended use and restrictions on use

1.3. Supplier

JR Simplot Company
 P.O. Box 70013
 Boise, ID 83707
 T 1-208-336-2110

1.4. Emergency telephone number

Emergency number : CHEMTREC 1-800-424-9300

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Corrosive to metals, Category 1 H290 May be corrosive to metals.
 Acute toxicity (oral), Category 4 H302 Harmful if swallowed.
 Skin corrosion/irritation, Category 1 H314 Causes severe skin burns and eye damage.

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labelling

Hazard pictograms (GHS US) :



Signal word (GHS US) :

Danger

Hazard statements (GHS US) :

H290 - May be corrosive to metals.
 H302 - Harmful if swallowed.
 H314 - Causes severe skin burns and eye damage.

Precautionary statements (GHS US) :

P234 - Keep only in original container.
 P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
 P264 - Wash hands, forearms and face thoroughly after handling.
 P270 - Do not eat, drink or smoke when using this product.
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.
 P301+P312 - If swallowed: Call a poison center/doctor/... if you feel unwell
 P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting
 P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
 P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
 P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P310 - Immediately call a poison center/doctor/...
 P321 - Specific treatment (see supplemental first aid instruction on this label)
 P330 - Rinse mouth.
 P363 - Wash contaminated clothing before reuse.
 P390 - Absorb spillage to prevent material damage.
 P405 - Store locked up.
 P406 - Store in corrosive resistant container with a resistant inner liner.
 P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

Fluorosilicic Acid (FSA)

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Name : Fluorosilicic Acid (FSA)

Name	Product identifier	%	GHS-US classification
Water	(CAS-No.) 7732-18-5	75 – 78	Not classified
hexafluorosilicic acid	(CAS-No.) 16961-83-4	23 – 25	Skin Corr. 1B, H314

Full text of hazard classes and H-statements : see section 16

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general	: If you feel unwell, seek medical advice. Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). Call a physician immediately.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Allow affected person to breathe fresh air. Allow the victim to rest.
First-aid measures after skin contact	: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Rinse skin with water/shower. Take off immediately all contaminated clothing. Call a physician immediately.
First-aid measures after eye contact	: Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Call a POISON CENTER/doctor if you feel unwell. Do not induce vomiting. Call a physician immediately.

4.2. Most important symptoms and effects (acute and delayed)

Potential adverse human health effects and symptoms	: Based on available data, the classification criteria are not met. Harmful if swallowed.
Symptoms/effects after skin contact	: Burns.
Symptoms/effects after eye contact	: Serious damage to eyes.
Symptoms/effects after ingestion	: Swallowing a small quantity of this material will result in serious health hazard. Burns.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Hazardous decomposition products in case of fire	: Toxic fumes may be released.
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5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing. Do not enter fire area without proper protective equipment, including respiratory protection.

Fluorosilicic Acid (FSA)

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Evacuate unnecessary personnel. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection". Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials. Absorb spillage to prevent material damage.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13. See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : May be corrosive to metals.

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray.

Hygiene measures : Always wash hands after handling the product. Do not eat, drink or smoke when using this product. Wash hands, forearms and face thoroughly after handling. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool. Keep only in the original container in a cool, well ventilated place away from : Keep container closed when not in use. Store in corrosive resistant container with a resistant inner liner. Keep only in original container. Store locked up.

Incompatible products : Strong bases. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight. Metals.

Packaging materials : Store in corrosive resistant container with a resistant inner liner.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Fluorosilicic Acid (FSA)	
No additional information available	
Water (7732-18-5)	
No additional information available	
hexafluorosilicic acid (16961-83-4)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH TWA (mg/m ³)	2.5 mg/m ³

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

Fluorosilicic Acid (FSA)

Safety Data Sheet

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8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure.

Materials for protective clothing:

Use chemically protective clothing

Hand protection:

Acid proof gloves should be worn to prevent contact

Eye protection:

Splash proof goggles and full-face shield should be worn at all times. Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

Wear appropriate mask

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Clear, colorless to pale straw liquid.
Colour	: Colourless
Odour	: characteristic
Odour threshold	: No data available
pH	: 1
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: 105 °C
Flash point	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Flammability (solid, gas)	: Non flammable.
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Solubility	: Soluble.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive limits	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

Fluorosilicic Acid (FSA)

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10.2. Chemical stability

Stable. Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Extremely high temperatures. Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Alkalis. Chlorites. Combustible solids and organic peroxides. Strong acids. Strong bases. metals. May be corrosive to metals.

10.6. Hazardous decomposition products

Corrosive fumes of fluorides. fume. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Harmful if swallowed.
 Acute toxicity (dermal) : Not classified
 Acute toxicity (inhalation) : Not classified

Fluorosilicic Acid (FSA)	
LD50 oral rat	430 mg/kg
ATE US (oral)	430 mg/kg bodyweight

Skin corrosion/irritation : Causes severe skin burns.
 pH: 1
 Serious eye damage/irritation : Assumed to cause serious eye damage
 pH: 1
 Respiratory or skin sensitisation : Not classified
 Germ cell mutagenicity : Not classified
 Carcinogenicity : Not classified

hexafluorosilicic acid (16961-83-4)	
IARC group	3 - Not classifiable

Reproductive toxicity : Not classified
 STOT-single exposure : Not classified
 STOT-repeated exposure : Not classified
 Aspiration hazard : Not classified
 Viscosity, kinematic : No data available
 Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met. Harmful if swallowed.
 Symptoms/effects after skin contact : Burns.
 Symptoms/effects after eye contact : Serious damage to eyes.
 Symptoms/effects after ingestion : Swallowing a small quantity of this material will result in serious health hazard. Burns.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment. Before neutralisation, the product may represent a danger to aquatic organisms.

hexafluorosilicic acid (16961-83-4)	
LC50 fish 1	> 10 mg/l (96 h; Brachydanio rerio)
Threshold limit algae 1	10 mg/l (96 h; Scenedesmus quadricauda; Cell numbers)

Fluorosilicic Acid (FSA)

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12.2. Persistence and degradability

Fluorosilicic Acid (FSA)	
Persistence and degradability	Not established.
Water (7732-18-5)	
Persistence and degradability	Not established.
hexafluorosilicic acid (16961-83-4)	
Persistence and degradability	Biodegradability: not applicable. Reacts with water: release of toxic/harmful substances. No (test)data on mobility of the components available. Not established.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

12.3. Bioaccumulative potential

Fluorosilicic Acid (FSA)	
Bioaccumulative potential	Not established.
Water (7732-18-5)	
Bioaccumulative potential	Not established.
hexafluorosilicic acid (16961-83-4)	
Bioaccumulative potential	Not bioaccumulative. Not established.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other information : Avoid unintentional release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

- Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
- Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
- Ecology - waste materials : Avoid unintentional release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

- Transport document description : UN1778 Fluorosilicic acid, 8, II
- UN-No.(DOT) : UN1778
- Proper Shipping Name (DOT) : Fluorosilicic acid
- Class (DOT) : 8 - Class 8 - Corrosive material 49 CFR 173.136
- Packing group (DOT) : II - Medium Danger
- Hazard labels (DOT) : 8 - Corrosive



- DOT Packaging Non Bulk (49 CFR 173.xxx) : 202
- DOT Packaging Bulk (49 CFR 173.xxx) : 242

Fluorosilicic Acid (FSA)

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DOT Special Provisions (49 CFR 172.102)	: A6 - For combination packagings, if plastic inner packagings are used, they must be packed in tightly closed metal receptacles before packing in outer packagings. A7 - Steel packagings must be corrosion-resistant or have protection against corrosion. B2 - MC 300, MC 301, MC 302, MC 303, MC 305, and MC 306 and DOT 406 cargo tanks are not authorized. B15 - Packagings must be protected with non-metallic linings impervious to the lading or have a suitable corrosion allowance. IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized. N3 - Glass inner packagings are permitted in combination or composite packagings only if the hazardous material is free from hydrofluoric acid. N34 - Aluminum construction materials are not authorized for any part of a packaging which is normally in contact with the hazardous material. T8 - 4 178.274(d)(2) Normal..... Prohibited TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively. TP12 - This material is considered highly corrosive to steel.
DOT Packaging Exceptions (49 CFR 173.xxx)	: None
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 1 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 30 L
DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
Other information	: No supplementary information available.

Transportation of Dangerous Goods

Transport by sea

Air transport

SECTION 15: Regulatory information

15.1. US Federal regulations

Fluorosilicic Acid (FSA)
Not listed on the United States TSCA (Toxic Substances Control Act) inventory

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

15.2. International regulations

CANADA

Water (7732-18-5)
Listed on the Canadian DSL (Domestic Substances List)
hexafluorosilicic acid (16961-83-4)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

Fluorosilicic Acid (FSA)

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Component	State or local regulations
hexafluorosilicic acid(16961-83-4)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Other information : None.

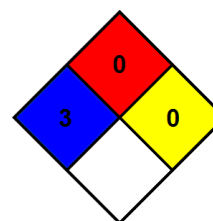
Full text of H-statements:

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.

NFPA health hazard : 3 - Materials that, under emergency conditions, can cause serious or permanent injury.

NFPA fire hazard : 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



Hazard Rating

Health : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given

Flammability : 0 Minimal Hazard - Materials that will not burn

Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

SDS US (GHS HazCom 2012)

Disclaimer: This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is to the best of our knowledge and belief, accurate and reliable as of the date compiled. However, no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE CONCERNING THE INFORMATION HEREIN PROVIDED. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use. We do not accept liability for any loss or damage that may occur from the use of this information nor do we offer warranty against patent infringement.

FLUOROSILICIC ACID (FSA)

HYDROFLUOROSILIC ACID (HFS)

NSF⁽¹⁾ & AWWA⁽²⁾ CERTIFIED

CHEMICAL PROPERTIES	SPECIFICATION ⁽³⁾	TYPICAL ⁽³⁾
ASSAY	23.0% Min - 25.0% Max	24.0%
FLUORINE (F)	18.0% Min	19.0%
LEAD (Pb)	200.0	0.4
HYDROFLUORIC ACID (HF)	1.0% Max	0.5%
ARSENIC (As) .....	.....	<40.0
IRON (Fe) .....	.....	20.0
PHOSPHATE (P ₂ O ₅) .....	.....	<200.0

PHYSICAL PROPERTIES

Chemical Formula (H₂SiF₆)

Specific Gravity @ 60°F & 24% FSA	1.23
Density (lbs/gal) @ 24% FSA	10.25
Boiling Point °F	222.5
Freezing Point °F	-4.0
Color (APHA)	<10
Visible Suspended Matter	None

SHIPPING POINT

Rock Springs, WY



Certified to
NSF/ANSI 60
Max Use
5 mg/L

⁽¹⁾Meets NSF/ANSI Standard 60

⁽²⁾Meets AWWA Standard B703-19

⁽³⁾ppm unless otherwise specified



SAFETY DATA SHEET

Hydrofluorosilicic Acid

Section 1. Identification

Product identifier : Hydrofluorosilicic Acid
Chemical name : Fluorosilicic acid
SDS # : 217
Other means of identification
 Synonyms : Fluorosilicic acid, Fluosilicic acid, Hydrofluorosilicic acid
 Product code(s) : HFSA
Product type : Liquid.

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

Identified uses Water Treatment Chemicals. Manufacture of inorganic products. Additives, Process Chemicals and Raw Materials	
Uses advised against Reserved for industrial and professional use only.	Reason Risk assessment.

Supplier's details : PCS Sales (USA), Inc. (A Subsidiary of Nutrien Ltd.)
 1101 Skokie Blvd.
 Suite 400
 Northbrook, IL 60062

 PCS Sales (Canada), Inc. (A Subsidiary of Nutrien Ltd.)
 Suite 500
 122 1st Avenue South
 Saskatoon, Saskatchewan Canada S7K 7G3

 Company phone number (North America):
 1-800-524-0132 (Customer Service)

 sds@nutrien.com - www.nutrien.com

Emergency telephone number (with hours of operation) : Nutrien North American
 24 HOUR EMERGENCY TELEPHONE NUMBERS:

 English:
 Transportation Emergencies: 1-800-792-8311
 Medical Emergencies: 1-303-389-1653

 French or Spanish:
 Transportation or Medical Emergencies: 1-303-389-1654

Section 2. Hazard identification

Classification of the substance or mixture : CORROSIVE TO METALS - Category 1
 ACUTE TOXICITY (oral) - Category 4
 ACUTE TOXICITY (dermal) - Category 4
 ACUTE TOXICITY (inhalation) - Category 4
 SKIN CORROSION - Category 1B
 SERIOUS EYE DAMAGE - Category 1

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

GHS label elements

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Hydrofluorosilicic Acid

Section 2. Hazard identification

Hazard pictograms



Signal word

: Danger

Hazard statements

: May be corrosive to metals.
 Harmful if swallowed, in contact with skin or if inhaled.
 Causes severe skin burns and eye damage.

Precautionary statements

General

: Not applicable.

Prevention

: Wear protective gloves. Wear protective clothing. Wear eye or face protection.
 Keep only in original packaging. Use only outdoors or in a well-ventilated area.
 Avoid breathing vapor. Do not eat, drink or smoke when using this product. Wash
 hands thoroughly after handling.

Response

: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 Immediately call a POISON CENTER or physician.
 IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth.
 Do NOT induce vomiting.
 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin
 with water. Wash contaminated clothing before reuse. Immediately call a POISON
 CENTER or physician.
 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 physician.
 Absorb spillage to prevent material damage.

Storage

: Store locked up. Store in a corrosion resistant container with a resistant inner liner.

Disposal

: Dispose of contents and container in accordance with all local, regional, national
and international regulations.

Supplemental label elements

: None known.

Other hazards which do not result in classification

: None known.

Section 3. Composition/information on ingredients

Substance/mixture

: Mixture

Ingredient name	% (w/w)	CAS number
Water	76 - 77	7732-18-5
Fluorosilicic acid	23 - 24	16961-83-4

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First-aid measures

Description of necessary first aid measures

Eye contact

: CORROSIVE. Begin eye irrigation immediately. All eye exposures require medical evaluation following decontamination. Immediately rinse eyes with large quantities of water or saline for a minimum 30 minutes, longer irrigation time is preferred if possible, due to the chemical reaction that occurs - see Notes to Physician below. If possible, remove contact lenses being careful not to cause additional eye damage. If the initial water supply is insufficient, keep the affected area wet with a moist cloth and transfer the person to the nearest place where rinsing can be continued for the recommended length of time. Call an ambulance for transport to hospital. Continue eye irrigation during transport. For additional advice call the medical emergency

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Section 4. First-aid measures

- number on this safety data sheet or your poison center or doctor.
- Inhalation** : CORROSIVE. If gases, mists or vapors exceed the IDLH or are present in unknown concentrations, rescuers must wear self-contained breathing apparatus and a suit resistant to gases (EPA Level B).
REMOVE PERSON TO FRESH AIR. Watch closely for signs of wheezing and breathing difficulties. Maintain an open airway. If not breathing, begin CPR. Oxygen may be administered by trained personnel. Affected persons who have stopped breathing or are having difficulty breathing or are unconscious need immediate medical attention. Symptoms may be delayed after exposure. The exposed person may need to be kept under medical surveillance for 24 - 48 hours. Call an ambulance for transport to hospital. For additional advice call the medical emergency number on this SDS or your poison center or doctor.
- Skin contact** : CORROSIVE. Causes severe burns. Immediately begin rinsing the affected areas with water. Remove contaminated clothing and shoes. Affected areas should be rinsed for a minimum 30 minutes, longer irrigation time is preferred if possible, due to the chemical reactions that occur. Luke-warm water is recommended for continued irrigation to prevent hypothermia. Conscious persons without breathing difficulties may benefit from prolonged irrigation in a fixed shower or bathing facility prior to hospital transport. Call an ambulance for transport to hospital. Continue skin irrigation during transport. For additional advice call the medical emergency number on this safety data sheet or your poison center or doctor.
- Ingestion** : CORROSIVE. May cause severe burns to the mouth, throat, and stomach. If the affected person requires cardiopulmonary resuscitation, avoid mouth to mouth contact. Do not induce vomiting. If vomiting occurs, attempt to keep head lower than the chest so that vomit does not enter the lungs. Wash face and mouth with water to remove visible material. If the exposed person is conscious and can swallow, give 1-2 sips of milk or water. Do not give anything else by mouth. Loosen tight clothing such as collar, tie, belt or waistband to prevent any breathing restrictions. For signs of breathing difficulties, refer to the INHALATION section. Call an ambulance for transportation to hospital. For additional advice, call the medical emergency number on this safety data sheet or your poison center or doctor.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : Harmful if inhaled. May cause respiratory irritation.
- Skin contact** : Causes severe burns.
- Ingestion** : Harmful if swallowed.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
- Ingestion** : Corrosive to the digestive tract. May cause acute or chronic fluorosis. Aspiration hazard if swallowed. Can enter lungs and cause damage. Adverse symptoms may include the following:
throat and stomach pain
nausea or vomiting
wheezing and breathing difficulties

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Hydrofluorosilicic Acid

Section 4. First-aid measures

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : If breathing is difficult, administer oxygen. Provide assisted ventilation as required. Contact with the skin or eyes at high pressures may result in injuries. Outcomes can be improved by minimizing time to decontamination and extending decontamination times to reduce tissue damage. Expert opinion indicates extended decontamination is required to remove corrosive chemicals. Skin and eye decontamination should be performed for a minimum of 20 - 30 minutes. Extended decontamination times may be required depending on the exposure. To avoid hypothermia, irrigation water should be maintained at a comfortable temperature. If the patient is not in extremis, it may be necessary to delay transport to emergency care facilities to ensure adequate decontamination time. However, early patient transport may be necessary depending on patient's condition or the availability of water. If possible, continue skin and/or eye irrigation during emergency medical transport. Double-bag contaminated clothing and personal belongings of the patient.
- Specific treatments** : Hyperkalemia, hyperphosphatemia, hypomagnesemia, or hypocalcemia may occur from acute oral ingestion or dermal burns to 1% of the body surface area or greater. For systemic poisoning, serum electrolytes including calcium and magnesium, and renal function should be monitored. Systemic hypocalcemia and hypomagnesemia may cause cardiac dysrhythmias and cardiovascular collapse. Administer sufficient calcium and magnesium to maintain serum concentrations in the high-normal range. Topical calcium gluconate gel with infusion of calcium gluconate solution are advised for dermal burns. Observation may be warranted. Pulmonary edema or electrolyte imbalance may occur several hours after exposure. Contact Nutrien's 24 Hr Medical Emergency telephone number for professional support: English: 1-303-389-1653; French or Spanish: 1-303-389-1654
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. Depending on the situation, the rescuer should wear an appropriate mask, gloves, protective clothing and a respirator or self-contained breathing apparatus. Mouth-to-mouth resuscitation of oral exposure patients is not recommended. First-aiders with contaminated clothing should be properly decontaminated.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Non-flammable. Material will not burn. Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst. In a fire, hazardous decomposition products may be produced. Emits highly corrosive fumes when heated to decomposition. Emits toxic fumes when heated to decomposition.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
acidic corrosive material

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Remark : Contain and collect the water used to fight the fire for later treatment and disposal. Rinse immediately contaminated clothing and skin with plenty of water before removing clothes. Take off contaminated clothing and wash it before reuse.

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Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". Refer to Emergency Response Guidebook, Guide 154 for further information regarding spill control and Isolation/Protective Action Distances Guidelines.

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused adverse impacts (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Put on appropriate personal protective equipment (see Section 8). Stop leak if without risk. Move containers from spill area. The spilled material may be neutralized with calcium carbonate, crushed limestone, or sodium carbonate. Use appropriate equipment to put the spilled material in a waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Only trained and qualified personnel are to participate in clean-up of spills. Put on appropriate personal protective equipment (see Section 8). Approach release from upwind. Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Contain and absorb using earth, sand or other inert material. Contaminated absorbent material may pose the same hazard as the spilled product. The spilled material may be neutralized with calcium carbonate, crushed limestone, or sodium carbonate. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from alkalis. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air. Flammable concentrations of vapor may accumulate in the headspace of containers. Contact your sales representative or a metallurgical specialist to ensure compatibility with your equipment. Store locked up. Separate from alkalis. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental

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Section 7. Handling and storage

contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
<p>Canadian Regulations: Fluorosilicic acid</p> <p>U.S. Federal Regulations: Fluorosilicic acid</p> <p>Water</p>	<p>CA Alberta Provincial: (Canada, 4/2009). 8 hrs OEL: 2.5 mg/m³, (as F) 8 hours.</p> <p>British Columbia Provincial: (Canada, 4/2014). TWA: 2.5 mg/m³, (as F) 8 hours.</p> <p>CA Ontario Provincial (Canada, 1/2013). TWA: 2.5 mg/m³, (as F) 8 hours.</p> <p>CA Quebec Provincial. (Canada, 1/2014). TWAEV: 2.5 mg/m³, (as F) 8 hours.</p> <p>ACGIH TLV (United States, 4/2014). TWA: 2.5 mg/m³, (as F) 8 hours.</p> <p>OSHA PEL 1989 (United States, 3/1989). TWA: 2.5 mg/m³, (as F) 8 hours.</p> <p>OSHA PEL (United States, 2/2013). TWA: 2.5 mg/m³, (as F) 8 hours.</p> <p>OSHA PEL Z2 (United States, 2/2013). TWA: 2.5 mg/m³ 8 hours. Form: Dust None.</p>

Appropriate engineering controls

: Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection

Hand protection

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. Recommended: butyl rubber
Contact your personal protective equipment manufacturer to verify the compatibility

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Section 8. Exposure controls/personal protection

- of the equipment for the intended purpose.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: chemical-resistant protective suit
Contact your personal protective equipment manufacturer to verify the compatibility of the equipment for the intended purpose.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: Impervious rubber safety boots.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Contact your personal protective equipment manufacturer to verify the compatibility of the equipment for the intended purpose.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Liquid. [Clear sparkling liquid.]
- Color** : Colorless to light yellow.
- Odor** : Pungent.
- Odor threshold** : Not available.
- pH** : 1.5 to 2 [Conc. (% w/w): 10%]
- Melting point** : -20 to -18°C (0 to -4°F)
- Boiling point** : 136 to 163°C (276.8 to 325.4°F)
- Flash point** : Not applicable.
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Non-flammable. Material will not burn. Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air. Flammable concentrations of hydrogen may accumulate in the headspace of containers.
- Lower and upper explosive (flammable) limits** : Not available.
- Vapor pressure** : 2.3 kPa (17.26 mm Hg) [room temperature]
- Vapor density** : Not available.
- Relative density** : 1.23
- Solubility** : Easily soluble in the following materials: cold water and hot water.
- Solubility in water** : Soluble
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Not applicable.
- Decomposition temperature** : 108°C (226.4°F)
- Viscosity** : Not available.

Section 10. Stability and reactivity

- Reactivity** : May react vigorously with water. Reacts violently with bases. Reactive or incompatible with the following materials:
oxidizing agents
chlorine-based bleaching agents
metals or alloys
glass
- Chemical stability** : The product is stable.

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Section 10. Stability and reactivity

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Contact with incompatible substances. Elevated temperature: 108°C

Incompatible materials : See above. Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air. Contact your sales representative or a metallurgical specialist to ensure compatibility with your equipment.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Fluorosilicic acid	LD50 Oral LC50 Inhalation Gas.	Rat Rat	430 mg/kg 621 ppm As HF	- 1Hr exposure adjusted to 4 hr equivalent

Conclusion/Summary : Harmful by inhalation, in contact with skin and if swallowed.

Irritation/Corrosion

Not available.

Conclusion/Summary

- Skin** : Corrosive to the skin.
- Eyes** : Corrosive to eyes.
- Respiratory** : Corrosive to the respiratory tract.

Sensitization

Not available.

Conclusion/Summary

- Skin** : No known significant effects or critical hazards.
- Respiratory** : No known significant effects or critical hazards.

Mutagenicity

Not available.

Conclusion/Summary

: No known significant effects or critical hazards.

Carcinogenicity

Not available.

Conclusion/Summary

: No known significant effects or critical hazards.

Reproductive toxicity

Not available.

Conclusion/Summary

: No known significant effects or critical hazards.

Teratogenicity

Not available.

Conclusion/Summary

: No known significant effects or critical hazards.

Specific target organ toxicity (single exposure)

Not available.

Hydrofluorosilicic Acid

Section 11. Toxicological information

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Inhalation
Ingestion
Dermal

Potential acute health effects

Eye contact : Causes serious eye damage.
Inhalation : Harmful if inhaled. May cause respiratory irritation.
Skin contact : Causes severe burns.
Ingestion : Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

Ingestion : Corrosive to the digestive tract. May cause acute or chronic fluorosis. Aspiration hazard if swallowed. Can enter lungs and cause damage. Adverse symptoms may include the following:
throat and stomach pain
nausea or vomiting
wheezing and breathing difficulties

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Corrosive to the eyes, skin, respiratory system and digestive tract.
Potential delayed effects : May cause acute or chronic fluorosis.

Long term exposure

Potential immediate effects : See above.
Potential delayed effects : See below.

Potential chronic health effects

Conclusion/Summary : Overexposure may cause skeletal fluorosis.
General : Adverse effects are typically the result of acute overexposure. These effects may be long term or permanent in nature. Repeated or prolonged overexposure may result in chronic health effects.
Carcinogenicity : No known significant effects or critical hazards.
Mutagenicity : No known significant effects or critical hazards.
Teratogenicity : No known significant effects or critical hazards.
Developmental effects : No known significant effects or critical hazards.

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Hydrofluorosilicic Acid

Section 11. Toxicological information

Fertility effects : No known significant effects or critical hazards.

Section 12. Ecological information

Toxicity

Not available.

Conclusion/Summary : May be harmful to the environment if released in large quantities.

Persistence and degradability

Not available.

Bioaccumulative potential

Not available.

Mobility in soil






Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	TDG Classification	DOT Classification	Mexico Classification	IMDG	IATA
UN number	UN1778	UN1778	UN1778	UN1778	UN1778
UN proper shipping name	Flurosilicic acid solution	Flurosilicic acid solution	Flurosilicic acid solution	Flurosilicic acid solution	Flurosilicic acid solution
Transport hazard class(es)	8 	8 	8 	8 	8 
Packing group	II	II	II	II	II
Environmental hazards	No.	No.	No.	No.	No.

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Hydrofluorosilicic Acid

Section 14. Transport information

<p>Additional information</p>	<p>Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.40-2.42 (Class 8). Explosive Limit and Limited Quantity Index 1 Passenger Carrying Road or Rail Index 1</p>	<p>Packaging instruction Exceptions: None. Non-bulk: 202. Bulk: 242. Quantity limitation Passenger aircraft/rail: 1 L. Cargo aircraft: 30 L. Special provisions A7, B2, B15, IB2, N3, N34, T8, TP2</p>	<p>Special provisions P001, IBC02, T8, TP2</p>	<p>Emergency schedules F-A, S-B Special provisions P001, IBC02, B20, T8, TP2</p>	<p>-</p>
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Special precautions for user : **Transport within user’s premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL and the IBC Code : Not available.

Section 15. Regulatory information

Canadian lists

- Canadian NPRI** : None of the components are listed.
- CEPA Toxic substances** : The following components are listed: Inorganic fluorides
- Canada inventory** : All components are listed or exempted.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

- Australia** : All components are listed or exempted.
- China** : All components are listed or exempted.
- Europe** : All components are listed or exempted.
- Japan** : **Japan inventory (ENCS):** All components are listed or exempted.
Japan inventory (ISHL): Not determined.
- Malaysia** : Not determined
- New Zealand** : All components are listed or exempted.
- Philippines** : All components are listed or exempted.
- Republic of Korea** : All components are listed or exempted.

<p>Date of issue/Date of revision : 6/5/2019</p>	<p>Date of previous issue : 4/30/2015</p>	<p>Version : 2</p>	<p>11/14</p>
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Hydrofluorosilicic Acid

Section 15. Regulatory information

Taiwan : All components are listed or exempted.
Turkey : Not determined.

U.S. Federal Regulations: : **TSCA 8(a) CDR Exempt/Partial exemption:** Not determined
TSCA 8(b) Active inventory: All components are listed or exempted.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304 Composition/information on ingredients

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Immediate (acute) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard.
Fluorosilicic acid	≥10 - ≤25	No.	No.	No.	Yes.	No.

State regulations

Massachusetts : The following components are listed: Hydrofluorosilicic Acid

New York : None of the components are listed.

New Jersey : The following components are listed: Silicofluoric acid; Fluorosilicic acid

Pennsylvania : None of the components are listed.

California Prop. 65 : This product, as manufactured, does NOT contain any substance in concentrations known to the state of California to cause cancer, birth defects or other reproductive harm. Nutrien cannot guarantee the downstream compliance of any product once out of Nutrien custody.

Section 16. Other information

History

Date of issue/Date of revision : 6/5/2019

Date of previous issue : 4/30/2015

Version : 2

Indicates information that has changed from previously issued version.
 General format change.

Date of issue/Date of revision : 6/5/2019 **Date of previous issue** : 4/30/2015 **Version** : 2 12/14

Hydrofluorosilicic Acid

Section 16. Other information

Key to abbreviations

- : ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IATA = International Air Transport Association
- IBC = Intermediate Bulk Container
- IMDG = International Maritime Dangerous Goods
- LogPow = logarithm of the octanol/water partition coefficient
- MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
- UN = United Nations
- HPR = Hazardous Products Regulations

Procedure used to derive the classification

Classification	Justification
CORROSIVE TO METALS - Category 1	Weight of evidence
ACUTE TOXICITY (oral) - Category 4	Weight of evidence
ACUTE TOXICITY (dermal) - Category 4	Weight of evidence
ACUTE TOXICITY (inhalation) - Category 4	Weight of evidence
SKIN CORROSION - Category 1B	Weight of evidence
SERIOUS EYE DAMAGE - Category 1	Weight of evidence

References

- : Transportation of Dangerous Goods Act and Clear Language Regulations, current edition at time of SDS preparation, Transport Canada;
- Hazardous Products Act and Regulations, current revision at time of SDS preparation, Health Canada;
- Domestic Substances List, current revision at time of SDS preparation, Environment Canada;
- 29 CFR Part 1910, current revision at time of SDS preparation, U.S. Occupational Safety and Health Administration;
- 40 CFR Parts 1-799, current revision at time of SDS preparation, U.S. Environmental Protection Agency;
- 49 CFR Parts 1-199, current revision at time of SDS preparation, U.S. Department of Transport;
- Mexican Official Standard NOM-018-STPS-2015, Harmonised System for the Identification and Communication of Hazards and Risks by Hazardous Chemicals in the Workplace;
- NORMA Oficial Mexicana NOM-010-STPS-2014, Agentes químicos contaminantes del ambiente laboral-Reconocimiento, evaluación y control.
- Mexican Official Standard NOM-002-SCT / 2011, List of the most commonly transported hazardous substances and materials;
- Threshold Limit Values for Chemical Substances, current edition at time of SDS preparation, American Conference of Governmental Industrial Hygienists;
- NFPA 400, National Fire Codes, National Fire Protection Association, current edition at time of SDS preparation;
- NFPA 704, National Fire Codes, National Fire Protection Association, current edition at time of SDS preparation;
- Corrosion Data Survey, Sixth Edition, 1985, National Association of Corrosion Engineers;
- ERG 2016, Emergency Response Guidebook, U.S. Department of Transport, Transport Canada, and the Secretariat of Transportation and Communications of Mexico
- Hazardous Substances Data Bank, current revision at time of SDS preparation, National Library of Medicine, Bethesda, Maryland
- Integrated Risk Information System, current revision at time of SDS preparation, U.S. Environmental Protection Agency, Washington, D.C.
- Pocket Guide to Chemical Hazards, current revision at time of SDS preparation, National Institute for Occupational Safety and Health, Cincinnati, Ohio ;
- Agency for Toxic Substances and Disease Registry Databank, current revision at time of SDS preparation, U.S. Department of Health and Human Services, Atlanta, Georgia
- National Toxicology Program, Report on Carcinogens, Division of the National Institute of Environmental Health Sciences, Research Triangle Park, North Carolina.

Date of issue/Date of revision

: 6/5/2019

Date of previous issue

: 4/30/2015

Version : 2

13/14

Hydrofluorosilicic Acid

Section 16. Other information

Registry of Toxic Effects of Chemical Substances. National Institute for Occupational Safety and Health, Cincinnati, Ohio
California Code of Regulations, Title 27, Div 4, Chapter 1, Proposition 65 Aug 30, 2018 rev and current updates

[Notice to reader](#)

DISCLAIMER AND LIMITATION OF LIABILITY

The information and recommendations contained in this Safety Data Sheet ("SDS") relate only to the specific material referred to herein (the "Material") and do not relate to the use of such Material in combination with any other material or process. The information and recommendations contained herein are believed to be current and correct as of the date of this SDS. **HOWEVER, THE INFORMATION AND RECOMMENDATIONS ARE PRESENTED WITHOUT WARRANTY, REPRESENTATION OR LICENSE OF ANY KIND, EXPRESS OR IMPLIED, WITH RESPECT TO THEIR ACCURACY, CORRECTNESS OR COMPLETENESS, AND THE SELLER, SUPPLIER AND MANUFACTURER OF THE MATERIAL AND THEIR RESPECTIVE AFFILIATES (COLLECTIVELY, THE "SUPPLIER") DISCLAIM ALL LIABILITY FOR RELIANCE ON SUCH INFORMATION AND RECOMMENDATIONS.** This SDS is not a guarantee of safety. A buyer or user of the Material (a "Recipient") is responsible for ensuring that it has all current information necessary to safely use the Material for its specific purpose.

FURTHERMORE, THE RECIPIENT ASSUMES ALL RISK IN CONNECTION WITH THE USE OF THE MATERIAL. THE RECIPIENT ASSUMES ALL RESPONSIBILITY FOR ENSURING THE MATERIAL IS USED IN A SAFE MANNER IN COMPLIANCE WITH APPLICABLE ENVIRONMENTAL, HEALTH, SAFETY AND SECURITY LAWS, POLICIES AND GUIDELINES. THE SUPPLIER DOES NOT WARRANT THE MERCHANTABILITY OF THE MATERIAL OR THE FITNESS OF THE MATERIAL FOR ANY PARTICULAR USE AND ASSUMES NO RESPONSIBILITY FOR INJURY OR DAMAGE CAUSED DIRECTLY OR INDIRECTLY BY OR RELATED TO THE USE OF THE MATERIAL.

<i>Date of issue/Date of revision</i>	: 6/5/2019	<i>Date of previous issue</i>	: 4/30/2015	<i>Version</i>	: 2	14/14
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Product Name: **Hydrofluorosilicic Acid (HFSA)****23% H₂SiF₆**Grade: **Industrial**Order Code: **HFSA**SDS No.: **217****INDUSTRIAL PRODUCTS**

Source: Aurora

Alternate Names: Fluorosilicic Acid, FSA

page 1 of 1

TYPICAL ANALYSIS	TYPICAL	GUARANTEED
HFSA, as H ₂ SiF ₆	24.1	23.0 min.
H ₂ SiF ₆ , as F	19.1	
Heavy Metals, as lead (Pb)	<0.02%	
Phosphates, as P ₂ O ₅	0.2	
Lead, as Pb	1.0 ppm	
Iron, as Fe ₂ O ₃	70 ppm	
Iodide, as I	16 ppm	
Arsenic, as As	6.0 ppm	

PHYSICAL DATA	TYPICAL	GUARANTEE
Appearance	Water White to Straw Yellow	
Specific Gravity @ 75°F	1.23	
Weight, lbs/gal @ 75°F	10.3	

DUBOIS CHEMICALS, INC.,

Item: **Less than full truck loads, regardless of the number of stops.**

Attachments

SEFLGCPG - FL Co-Op - FSA - Bid Attachments - 20211208.pdf



December 7, 2021

City of Ft. Lauderdale - SEFLGPG

Re: Bid 12595-322 Hydrofluosilicic Acid (Co-Op)

Dear Co-Op Team,

DuBois Chemicals, Inc, formally operating as BHS Marketing, LLC d.b.a. BHS Specialty Chemicals is in receipt of the above bid, due December 8.

We are pleased to quote on your requirements and have done so on the BidSync web site.

Should DuBois' offer be accepted I have also included contact information for placing orders as well as my contact information for any future bid or contract related issues or questions.

DuBois Chemicals appreciated the opportunity to bid and looks forward to hearing the results of your chemical requirement bid. Please feel free to contact Laura Lanthier or myself should you have any questions.

Sincerely,

A handwritten signature in blue ink that reads 'Betty K. Jones'.

Betty Kendall-Jones
Municipal Bid Specialist
PH: 385.549.0086
Email: Betty.Kendall-Jones@duboischemicals.com

Bid Department: 1717 E. Fargo Ave., Nampa, ID 83687
DuBois Chemicals ▪ 3630 East Kemper Road ▪ Sharonville, OH ▪
45241-2011 800 438 2647 ▪ www.duboischemicals.com



Company Information 2022

Company Name: DuBois Chemicals, Inc.

Company Corporate Address: 3630 E. Kemper Rd.
Cincinnati, OH 45241

Phone Number: 1-800-438-2647

Fax Number: 1-800-543-1720

Federal Tax ID#: 80-0244824

State of Formation: Delaware

Payment Remit to Address: DuBois Chemicals, Inc.
2659 SOLUTION CENTER
CHICAGO, IL 60677-2066

Bids & Contracts: Mailing Address:
1717 E Fargo Ave
Nampa, ID 83687

Group Email:
bids@duboischchemicals.com

Laura Lanthier
Manager, Municipal Bids & Contracts
Phone: 208-932-6615
Email: laura.lanthier@duboischchemicals.com

Betty Kendall-Jones
Municipal Bid Specialist
Phone: 385-549-0086
Email: Betty.Kendall-Jones@duboischchemicals.com

Fluorosilicic Acid Order Placement:

Email: FSA@duboischchemicals.com

Customer Service

Veronica Childers

Direct Line: 208-541-2812

Office: 208-466-8437

Fax: 208-466-8989

Veronica.Childers@duboischchemicals.com

Alternate Contact: John Wiemer

Direct Line: 208-830-1436

John.Wiemer@duboischchemicals.com

Soda Ash and Other Chemical Order Placement:

Email: BHS_orders@duboischchemicals.com
and CS@duboischchemicals.com

Toll Free: (800) 999-8233

Fax: (801) 973-8838

Customer Service

Direct Line: 801-973-8232

Email: gia.frederick@duboischchemicals.com



WRITTEN CONSENT OF DUBOIS CHEMICALS, INC.
{THE "CORPORATION"}

The undersigned, constituting Chief Executive Officer who has been authorized by the Board of Directors of DuBois Chemicals, Inc. to sign, adopt and consent on behalf of the Board of Directors to the following action and resolution:

1. DuBois employment of Laura Lanthier, Manager Bids and Contracts of the Corporation and Betty Kendall-Jones, Municipal Bids Specialist.
2. Laura Lanthier and Betty Kendall-Jones are authorized to execute, for and on behalf of this Corporation, all bid documents and instruments as may be necessary to complete and enter into Governmental Contracts or Agreements.



Jeff W. Welsh
President and CEO

March 26, 2018
Date

3630 East Kemper Road • Cincinnati, OH 45241
Phone: 800.438.2647 • Fax: 513 -326 -8320 • www.duboischemicals.com



Fluorosilicic Acid (FSA)

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 03/25/2021 Version: 1.0

SECTION 1: Identification

1.1. Identification

Product form : Substance
 Substance name : Fluorosilicic Acid (FSA)
 Chemical name : Hydro Fluorosilicic Acid (HSA)
 Product code : M17200

1.2. Recommended use and restrictions on use

1.3. Supplier

JR Simplot Company
 P.O. Box 70013
 Boise, ID 83707
 T 1-208-336-2110

1.4. Emergency telephone number

Emergency number : CHEMTREC 1-800-424-9300

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Corrosive to metals, Category 1 H290 May be corrosive to metals.
 Acute toxicity (oral), Category 4 H302 Harmful if swallowed.
 Skin corrosion/irritation, Category 1 H314 Causes severe skin burns and eye damage.

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labelling

Hazard pictograms (GHS US) :



Signal word (GHS US) :

Danger

Hazard statements (GHS US) :

H290 - May be corrosive to metals.
 H302 - Harmful if swallowed.
 H314 - Causes severe skin burns and eye damage.

Precautionary statements (GHS US) :

P234 - Keep only in original container.
 P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
 P264 - Wash hands, forearms and face thoroughly after handling.
 P270 - Do not eat, drink or smoke when using this product.
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.
 P301+P312 - If swallowed: Call a poison center/doctor/... if you feel unwell
 P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting
 P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
 P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
 P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P310 - Immediately call a poison center/doctor/...
 P321 - Specific treatment (see supplemental first aid instruction on this label)
 P330 - Rinse mouth.
 P363 - Wash contaminated clothing before reuse.
 P390 - Absorb spillage to prevent material damage.
 P405 - Store locked up.
 P406 - Store in corrosive resistant container with a resistant inner liner.
 P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

Fluorosilicic Acid (FSA)

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Name : Fluorosilicic Acid (FSA)

Name	Product identifier	%	GHS-US classification
Water	(CAS-No.) 7732-18-5	75 – 78	Not classified
hexafluorosilicic acid	(CAS-No.) 16961-83-4	23 – 25	Skin Corr. 1B, H314

Full text of hazard classes and H-statements : see section 16

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general	: If you feel unwell, seek medical advice. Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). Call a physician immediately.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Allow affected person to breathe fresh air. Allow the victim to rest.
First-aid measures after skin contact	: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Rinse skin with water/shower. Take off immediately all contaminated clothing. Call a physician immediately.
First-aid measures after eye contact	: Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Call a POISON CENTER/doctor if you feel unwell. Do not induce vomiting. Call a physician immediately.

4.2. Most important symptoms and effects (acute and delayed)

Potential adverse human health effects and symptoms	: Based on available data, the classification criteria are not met. Harmful if swallowed.
Symptoms/effects after skin contact	: Burns.
Symptoms/effects after eye contact	: Serious damage to eyes.
Symptoms/effects after ingestion	: Swallowing a small quantity of this material will result in serious health hazard. Burns.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Hazardous decomposition products in case of fire	: Toxic fumes may be released.
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5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing. Do not enter fire area without proper protective equipment, including respiratory protection.

Fluorosilicic Acid (FSA)

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Evacuate unnecessary personnel. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection". Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials. Absorb spillage to prevent material damage.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13. See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : May be corrosive to metals.

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray.

Hygiene measures : Always wash hands after handling the product. Do not eat, drink or smoke when using this product. Wash hands, forearms and face thoroughly after handling. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool. Keep only in the original container in a cool, well ventilated place away from : Keep container closed when not in use. Store in corrosive resistant container with a resistant inner liner. Keep only in original container. Store locked up.

Incompatible products : Strong bases. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight. Metals.

Packaging materials : Store in corrosive resistant container with a resistant inner liner.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Fluorosilicic Acid (FSA)	
No additional information available	
Water (7732-18-5)	
No additional information available	
hexafluorosilicic acid (16961-83-4)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH TWA (mg/m ³)	2.5 mg/m ³

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

Fluorosilicic Acid (FSA)

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure.

Materials for protective clothing:

Use chemically protective clothing

Hand protection:

Acid proof gloves should be worn to prevent contact

Eye protection:

Splash proof goggles and full-face shield should be worn at all times. Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

Wear appropriate mask

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Clear, colorless to pale straw liquid.
Colour	: Colourless
Odour	: characteristic
Odour threshold	: No data available
pH	: 1
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: 105 °C
Flash point	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Flammability (solid, gas)	: Non flammable.
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Solubility	: Soluble.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive limits	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

Fluorosilicic Acid (FSA)

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

10.2. Chemical stability

Stable. Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Extremely high temperatures. Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Alkalis. Chlorites. Combustible solids and organic peroxides. Strong acids. Strong bases. metals. May be corrosive to metals.

10.6. Hazardous decomposition products

Corrosive fumes of fluorides. fume. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Harmful if swallowed.
 Acute toxicity (dermal) : Not classified
 Acute toxicity (inhalation) : Not classified

Fluorosilicic Acid (FSA)	
LD50 oral rat	430 mg/kg
ATE US (oral)	430 mg/kg bodyweight

Skin corrosion/irritation : Causes severe skin burns.
 pH: 1
 Serious eye damage/irritation : Assumed to cause serious eye damage
 pH: 1
 Respiratory or skin sensitisation : Not classified
 Germ cell mutagenicity : Not classified
 Carcinogenicity : Not classified

hexafluorosilicic acid (16961-83-4)	
IARC group	3 - Not classifiable

Reproductive toxicity : Not classified
 STOT-single exposure : Not classified
 STOT-repeated exposure : Not classified
 Aspiration hazard : Not classified
 Viscosity, kinematic : No data available
 Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met. Harmful if swallowed.
 Symptoms/effects after skin contact : Burns.
 Symptoms/effects after eye contact : Serious damage to eyes.
 Symptoms/effects after ingestion : Swallowing a small quantity of this material will result in serious health hazard. Burns.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment. Before neutralisation, the product may represent a danger to aquatic organisms.

hexafluorosilicic acid (16961-83-4)	
LC50 fish 1	> 10 mg/l (96 h; Brachydanio rerio)
Threshold limit algae 1	10 mg/l (96 h; Scenedesmus quadricauda; Cell numbers)

Fluorosilicic Acid (FSA)

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

12.2. Persistence and degradability

Fluorosilicic Acid (FSA)	
Persistence and degradability	Not established.
Water (7732-18-5)	
Persistence and degradability	Not established.
hexafluorosilicic acid (16961-83-4)	
Persistence and degradability	Biodegradability: not applicable. Reacts with water: release of toxic/harmful substances. No (test)data on mobility of the components available. Not established.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

12.3. Bioaccumulative potential

Fluorosilicic Acid (FSA)	
Bioaccumulative potential	Not established.
Water (7732-18-5)	
Bioaccumulative potential	Not established.
hexafluorosilicic acid (16961-83-4)	
Bioaccumulative potential	Not bioaccumulative. Not established.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other information : Avoid unintentional release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
 Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
 Ecology - waste materials : Avoid unintentional release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN1778 Fluorosilicic acid, 8, II
 UN-No.(DOT) : UN1778
 Proper Shipping Name (DOT) : Fluorosilicic acid
 Class (DOT) : 8 - Class 8 - Corrosive material 49 CFR 173.136
 Packing group (DOT) : II - Medium Danger
 Hazard labels (DOT) : 8 - Corrosive



DOT Packaging Non Bulk (49 CFR 173.xxx) : 202
 DOT Packaging Bulk (49 CFR 173.xxx) : 242

Fluorosilicic Acid (FSA)

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according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

DOT Special Provisions (49 CFR 172.102)	: A6 - For combination packagings, if plastic inner packagings are used, they must be packed in tightly closed metal receptacles before packing in outer packagings. A7 - Steel packagings must be corrosion-resistant or have protection against corrosion. B2 - MC 300, MC 301, MC 302, MC 303, MC 305, and MC 306 and DOT 406 cargo tanks are not authorized. B15 - Packagings must be protected with non-metallic linings impervious to the lading or have a suitable corrosion allowance. IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized. N3 - Glass inner packagings are permitted in combination or composite packagings only if the hazardous material is free from hydrofluoric acid. N34 - Aluminum construction materials are not authorized for any part of a packaging which is normally in contact with the hazardous material. T8 - 4 178.274(d)(2) Normal..... Prohibited TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively. TP12 - This material is considered highly corrosive to steel.
DOT Packaging Exceptions (49 CFR 173.xxx)	: None
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 1 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 30 L
DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
Other information	: No supplementary information available.

Transportation of Dangerous Goods

Transport by sea

Air transport

SECTION 15: Regulatory information

15.1. US Federal regulations

Fluorosilicic Acid (FSA)
Not listed on the United States TSCA (Toxic Substances Control Act) inventory

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

15.2. International regulations

CANADA

Water (7732-18-5)
Listed on the Canadian DSL (Domestic Substances List)
hexafluorosilicic acid (16961-83-4)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

Fluorosilicic Acid (FSA)

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Component	State or local regulations
hexafluorosilicic acid(16961-83-4)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Other information : None.

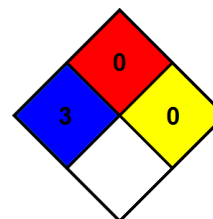
Full text of H-statements:

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.

NFPA health hazard : 3 - Materials that, under emergency conditions, can cause serious or permanent injury.

NFPA fire hazard : 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



Hazard Rating

Health : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given

Flammability : 0 Minimal Hazard - Materials that will not burn

Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

SDS US (GHS HazCom 2012)

Disclaimer: This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is to the best of our knowledge and belief, accurate and reliable as of the date compiled. However, no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE CONCERNING THE INFORMATION HEREIN PROVIDED. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use. We do not accept liability for any loss or damage that may occur from the use of this information nor do we offer warranty against patent infringement.

FLUOROSILICIC ACID (FSA)

HYDROFLUOROSILIC ACID (HFS)

NSF⁽¹⁾ & AWWA⁽²⁾ CERTIFIED

CHEMICAL PROPERTIES	SPECIFICATION ⁽³⁾	TYPICAL ⁽³⁾
ASSAY	23.0% Min - 25.0% Max	24.0%
FLUORINE (F)	18.0% Min	19.0%
LEAD (Pb)	200.0	0.4
HYDROFLUORIC ACID (HF)	1.0% Max	0.5%
ARSENIC (As) .....	.....	<40.0
IRON (Fe) .....	.....	20.0
PHOSPHATE (P ₂ O ₅) .....	.....	<200.0

PHYSICAL PROPERTIES

Chemical Formula (H₂SiF₆)

Specific Gravity @ 60°F & 24% FSA	1.23
Density (lbs/gal) @ 24% FSA	10.25
Boiling Point °F	222.5
Freezing Point °F	-4.0
Color (APHA)	<10
Visible Suspended Matter	None

SHIPPING POINT

Rock Springs, WY



Certified to
NSF/ANSI 60
Max Use
5 mg/L

⁽¹⁾Meets NSF/ANSI Standard 60

⁽²⁾Meets AWWA Standard B703-19

⁽³⁾ppm unless otherwise specified

SAFETY DATA SHEET

Hydrofluorosilicic Acid

Section 1. Identification

Product identifier	: Hydrofluorosilicic Acid
Chemical name	: Fluorosilicic acid
SDS #	: 217
Other means of identification	
	Synonyms : Fluorosilicic acid, Fluosilicic acid, Hydrofluorosilicic acid
	Product code(s) : HFSA
Product type	: Liquid.

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

Identified uses	
Water Treatment Chemicals. Manufacture of inorganic products. Additives, Process Chemicals and Raw Materials	
Uses advised against	Reason
Reserved for industrial and professional use only.	Risk assessment.

Supplier's details	: PCS Sales (USA), Inc. (A Subsidiary of Nutrien Ltd.) 1101 Skokie Blvd. Suite 400 Northbrook, IL 60062
	PCS Sales (Canada), Inc. (A Subsidiary of Nutrien Ltd.) Suite 500 122 1st Avenue South Saskatoon, Saskatchewan Canada S7K 7G3
	Company phone number (North America): 1-800-524-0132 (Customer Service)
	sds@nutrien.com - www.nutrien.com

Emergency telephone number (with hours of operation)	: Nutrien North American 24 HOUR EMERGENCY TELEPHONE NUMBERS:
	English: Transportation Emergencies: 1-800-792-8311 Medical Emergencies: 1-303-389-1653
	French or Spanish: Transportation or Medical Emergencies: 1-303-389-1654

Section 2. Hazard identification

Classification of the substance or mixture	: CORROSIVE TO METALS - Category 1 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SKIN CORROSION - Category 1B SERIOUS EYE DAMAGE - Category 1
OSHA/HCS status	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

GHS label elements

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Hydrofluorosilicic Acid

Section 2. Hazard identification

Hazard pictograms :



Signal word :

Danger

Hazard statements :

May be corrosive to metals.
Harmful if swallowed, in contact with skin or if inhaled.
Causes severe skin burns and eye damage.

Precautionary statements

General :

Not applicable.

Prevention :

Wear protective gloves. Wear protective clothing. Wear eye or face protection. Keep only in original packaging. Use only outdoors or in a well-ventilated area. Avoid breathing vapor. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.

Response :

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician.
IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or physician.
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 physician.
Absorb spillage to prevent material damage.

Storage :

Store locked up. Store in a corrosion resistant container with a resistant inner liner.

Disposal :

Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements :

None known.

Other hazards which do not result in classification :

None known.

Section 3. Composition/information on ingredients

Substance/mixture :

Mixture

Ingredient name	% (w/w)	CAS number
Water	76 - 77	7732-18-5
Fluorosilicic acid	23 - 24	16961-83-4

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First-aid measures

Description of necessary first aid measures

Eye contact :

CORROSIVE. Begin eye irrigation immediately. All eye exposures require medical evaluation following decontamination. Immediately rinse eyes with large quantities of water or saline for a minimum 30 minutes, longer irrigation time is preferred if possible, due to the chemical reaction that occurs - see Notes to Physician below. If possible, remove contact lenses being careful not to cause additional eye damage. If the initial water supply is insufficient, keep the affected area wet with a moist cloth and transfer the person to the nearest place where rinsing can be continued for the recommended length of time. Call an ambulance for transport to hospital. Continue eye irrigation during transport. For additional advice call the medical emergency

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Section 4. First-aid measures

- number on this safety data sheet or your poison center or doctor.
- Inhalation** : CORROSIVE. If gases, mists or vapors exceed the IDLH or are present in unknown concentrations, rescuers must wear self-contained breathing apparatus and a suit resistant to gases (EPA Level B).
REMOVE PERSON TO FRESH AIR. Watch closely for signs of wheezing and breathing difficulties. Maintain an open airway. If not breathing, begin CPR. Oxygen may be administered by trained personnel. Affected persons who have stopped breathing or are having difficulty breathing or are unconscious need immediate medical attention. Symptoms may be delayed after exposure. The exposed person may need to be kept under medical surveillance for 24 - 48 hours. Call an ambulance for transport to hospital. For additional advice call the medical emergency number on this SDS or your poison center or doctor.
- Skin contact** : CORROSIVE. Causes severe burns. Immediately begin rinsing the affected areas with water. Remove contaminated clothing and shoes. Affected areas should be rinsed for a minimum 30 minutes, longer irrigation time is preferred if possible, due to the chemical reactions that occur. Luke-warm water is recommended for continued irrigation to prevent hypothermia. Conscious persons without breathing difficulties may benefit from prolonged irrigation in a fixed shower or bathing facility prior to hospital transport. Call an ambulance for transport to hospital. Continue skin irrigation during transport. For additional advice call the medical emergency number on this safety data sheet or your poison center or doctor.
- Ingestion** : CORROSIVE. May cause severe burns to the mouth, throat, and stomach. If the affected person requires cardiopulmonary resuscitation, avoid mouth to mouth contact. Do not induce vomiting. If vomiting occurs, attempt to keep head lower than the chest so that vomit does not enter the lungs. Wash face and mouth with water to remove visible material. If the exposed person is conscious and can swallow, give 1-2 sips of milk or water. Do not give anything else by mouth. Loosen tight clothing such as collar, tie, belt or waistband to prevent any breathing restrictions. For signs of breathing difficulties, refer to the INHALATION section. Call an ambulance for transportation to hospital. For additional advice, call the medical emergency number on this safety data sheet or your poison center or doctor.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : Harmful if inhaled. May cause respiratory irritation.
- Skin contact** : Causes severe burns.
- Ingestion** : Harmful if swallowed.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
- Ingestion** : Corrosive to the digestive tract. May cause acute or chronic fluorosis. Aspiration hazard if swallowed. Can enter lungs and cause damage. Adverse symptoms may include the following:
throat and stomach pain
nausea or vomiting
wheezing and breathing difficulties

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Section 4. First-aid measures

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : If breathing is difficult, administer oxygen. Provide assisted ventilation as required. Contact with the skin or eyes at high pressures may result in injuries. Outcomes can be improved by minimizing time to decontamination and extending decontamination times to reduce tissue damage. Expert opinion indicates extended decontamination is required to remove corrosive chemicals. Skin and eye decontamination should be performed for a minimum of 20 - 30 minutes. Extended decontamination times may be required depending on the exposure. To avoid hypothermia, irrigation water should be maintained at a comfortable temperature. If the patient is not in extremis, it may be necessary to delay transport to emergency care facilities to ensure adequate decontamination time. However, early patient transport may be necessary depending on patient's condition or the availability of water. If possible, continue skin and/or eye irrigation during emergency medical transport. Double-bag contaminated clothing and personal belongings of the patient.
- Specific treatments** : Hyperkalemia, hyperphosphatemia, hypomagnesemia, or hypocalcemia may occur from acute oral ingestion or dermal burns to 1% of the body surface area or greater. For systemic poisoning, serum electrolytes including calcium and magnesium, and renal function should be monitored. Systemic hypocalcemia and hypomagnesemia may cause cardiac dysrhythmias and cardiovascular collapse. Administer sufficient calcium and magnesium to maintain serum concentrations in the high-normal range. Topical calcium gluconate gel with infusion of calcium gluconate solution are advised for dermal burns. Observation may be warranted. Pulmonary edema or electrolyte imbalance may occur several hours after exposure. Contact Nutrien's 24 Hr Medical Emergency telephone number for professional support: English: 1-303-389-1653; French or Spanish: 1-303-389-1654
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. Depending on the situation, the rescuer should wear an appropriate mask, gloves, protective clothing and a respirator or self-contained breathing apparatus. Mouth-to-mouth resuscitation of oral exposure patients is not recommended. First-aiders with contaminated clothing should be properly decontaminated.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Non-flammable. Material will not burn. Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

- Specific hazards arising from the chemical** : In a fire or if heated, a pressure increase will occur and the container may burst. In a fire, hazardous decomposition products may be produced. Emits highly corrosive fumes when heated to decomposition. Emits toxic fumes when heated to decomposition.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
acidic corrosive material

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

- Remark** : Contain and collect the water used to fight the fire for later treatment and disposal. Rinse immediately contaminated clothing and skin with plenty of water before removing clothes. Take off contaminated clothing and wash it before reuse.

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Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". Refer to Emergency Response Guidebook, Guide 154 for further information regarding spill control and Isolation/Protective Action Distances Guidelines.

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused adverse impacts (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Put on appropriate personal protective equipment (see Section 8). Stop leak if without risk. Move containers from spill area. The spilled material may be neutralized with calcium carbonate, crushed limestone, or sodium carbonate. Use appropriate equipment to put the spilled material in a waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Only trained and qualified personnel are to participate in clean-up of spills. Put on appropriate personal protective equipment (see Section 8). Approach release from upwind. Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Contain and absorb using earth, sand or other inert material. Contaminated absorbent material may pose the same hazard as the spilled product. The spilled material may be neutralized with calcium carbonate, crushed limestone, or sodium carbonate. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from alkalis. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air. Flammable concentrations of vapor may accumulate in the headspace of containers. Contact your sales representative or a metallurgical specialist to ensure compatibility with your equipment. Store locked up. Separate from alkalis. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental

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Section 7. Handling and storage

contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
<p>Canadian Regulations: Fluorosilicic acid</p> <p>U.S. Federal Regulations: Fluorosilicic acid</p>	<p>CA Alberta Provincial: (Canada, 4/2009). 8 hrs OEL: 2.5 mg/m³, (as F) 8 hours. British Columbia Provincial: (Canada, 4/2014). TWA: 2.5 mg/m³, (as F) 8 hours. CA Ontario Provincial (Canada, 1/2013). TWA: 2.5 mg/m³, (as F) 8 hours. CA Quebec Provincial. (Canada, 1/2014). TWAEV: 2.5 mg/m³, (as F) 8 hours.</p> <p>ACGIH TLV (United States, 4/2014). TWA: 2.5 mg/m³, (as F) 8 hours. OSHA PEL 1989 (United States, 3/1989). TWA: 2.5 mg/m³, (as F) 8 hours. OSHA PEL (United States, 2/2013). TWA: 2.5 mg/m³, (as F) 8 hours. OSHA PEL Z2 (United States, 2/2013). TWA: 2.5 mg/m³ 8 hours. Form: Dust</p>
Water	None.

Appropriate engineering controls : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. Recommended: butyl rubber
Contact your personal protective equipment manufacturer to verify the compatibility

Hydrofluorosilicic Acid

Section 8. Exposure controls/personal protection

- of the equipment for the intended purpose.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: chemical-resistant protective suit
Contact your personal protective equipment manufacturer to verify the compatibility of the equipment for the intended purpose.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: Impervious rubber safety boots.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Contact your personal protective equipment manufacturer to verify the compatibility of the equipment for the intended purpose.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Liquid. [Clear sparkling liquid.]
- Color** : Colorless to light yellow.
- Odor** : Pungent.
- Odor threshold** : Not available.
- pH** : 1.5 to 2 [Conc. (% w/w): 10%]
- Melting point** : -20 to -18°C (0 to -4°F)
- Boiling point** : 136 to 163°C (276.8 to 325.4°F)
- Flash point** : Not applicable.
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Non-flammable. Material will not burn. Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air. Flammable concentrations of hydrogen may accumulate in the headspace of containers.
- Lower and upper explosive (flammable) limits** : Not available.
- Vapor pressure** : 2.3 kPa (17.26 mm Hg) [room temperature]
- Vapor density** : Not available.
- Relative density** : 1.23
- Solubility** : Easily soluble in the following materials: cold water and hot water.
- Solubility in water** : Soluble
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Not applicable.
- Decomposition temperature** : 108°C (226.4°F)
- Viscosity** : Not available.

Section 10. Stability and reactivity

- Reactivity** : May react vigorously with water. Reacts violently with bases. Reactive or incompatible with the following materials:
oxidizing agents
chlorine-based bleaching agents
metals or alloys
glass
- Chemical stability** : The product is stable.

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Section 10. Stability and reactivity

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Contact with incompatible substances. Elevated temperature: 108°C

Incompatible materials : See above. Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air. Contact your sales representative or a metallurgical specialist to ensure compatibility with your equipment.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Fluorosilicic acid	LD50 Oral LC50 Inhalation Gas.	Rat Rat	430 mg/kg 621 ppm As HF	- 1Hr exposure adjusted to 4 hr equivalent

Conclusion/Summary : Harmful by inhalation, in contact with skin and if swallowed.

Irritation/Corrosion

Not available.

Conclusion/Summary

- Skin** : Corrosive to the skin.
- Eyes** : Corrosive to eyes.
- Respiratory** : Corrosive to the respiratory tract.

Sensitization

Not available.

Conclusion/Summary

- Skin** : No known significant effects or critical hazards.
- Respiratory** : No known significant effects or critical hazards.

Mutagenicity

Not available.

Conclusion/Summary

: No known significant effects or critical hazards.

Carcinogenicity

Not available.

Conclusion/Summary

: No known significant effects or critical hazards.

Reproductive toxicity

Not available.

Conclusion/Summary

: No known significant effects or critical hazards.

Teratogenicity

Not available.

Conclusion/Summary

: No known significant effects or critical hazards.

Specific target organ toxicity (single exposure)

Not available.

Hydrofluorosilicic Acid

Section 11. Toxicological information

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Inhalation
Ingestion
Dermal

Potential acute health effects

Eye contact : Causes serious eye damage.
Inhalation : Harmful if inhaled. May cause respiratory irritation.
Skin contact : Causes severe burns.
Ingestion : Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

Ingestion : Corrosive to the digestive tract. May cause acute or chronic fluorosis. Aspiration hazard if swallowed. Can enter lungs and cause damage. Adverse symptoms may include the following:
throat and stomach pain
nausea or vomiting
wheezing and breathing difficulties

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Corrosive to the eyes, skin, respiratory system and digestive tract.
Potential delayed effects : May cause acute or chronic fluorosis.

Long term exposure

Potential immediate effects : See above.
Potential delayed effects : See below.

Potential chronic health effects

Conclusion/Summary : Overexposure may cause skeletal fluorosis.
General : Adverse effects are typically the result of acute overexposure. These effects may be long term or permanent in nature. Repeated or prolonged overexposure may result in chronic health effects.
Carcinogenicity : No known significant effects or critical hazards.
Mutagenicity : No known significant effects or critical hazards.
Teratogenicity : No known significant effects or critical hazards.
Developmental effects : No known significant effects or critical hazards.

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Section 11. Toxicological information

Fertility effects : No known significant effects or critical hazards.

Section 12. Ecological information

Toxicity

Not available.

Conclusion/Summary : May be harmful to the environment if released in large quantities.

Persistence and degradability

Not available.

Bioaccumulative potential

Not available.

Mobility in soil






Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	TDG Classification	DOT Classification	Mexico Classification	IMDG	IATA
UN number	UN1778	UN1778	UN1778	UN1778	UN1778
UN proper shipping name	Flurosilicic acid solution	Flurosilicic acid solution	Flurosilicic acid solution	Flurosilicic acid solution	Flurosilicic acid solution
Transport hazard class(es)	8 	8 	8 	8 	8 
Packing group	II	II	II	II	II
Environmental hazards	No.	No.	No.	No.	No.

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Section 14. Transport information

<p>Additional information</p>	<p>Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.40-2.42 (Class 8). Explosive Limit and Limited Quantity Index 1 Passenger Carrying Road or Rail Index 1</p>	<p>Packaging instruction Exceptions: None. Non-bulk: 202. Bulk: 242. Quantity limitation Passenger aircraft/rail: 1 L. Cargo aircraft: 30 L. Special provisions A7, B2, B15, IB2, N3, N34, T8, TP2</p>	<p>Special provisions P001, IBC02, T8, TP2</p>	<p>Emergency schedules F-A, S-B Special provisions P001, IBC02, B20, T8, TP2</p>	<p>-</p>
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Special precautions for user : **Transport within user’s premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL and the IBC Code : Not available.

Section 15. Regulatory information

Canadian lists

- Canadian NPRI** : None of the components are listed.
- CEPA Toxic substances** : The following components are listed: Inorganic fluorides
- Canada inventory** : All components are listed or exempted.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

- Australia** : All components are listed or exempted.
- China** : All components are listed or exempted.
- Europe** : All components are listed or exempted.
- Japan** : **Japan inventory (ENCS):** All components are listed or exempted.
Japan inventory (ISHL): Not determined.
- Malaysia** : Not determined
- New Zealand** : All components are listed or exempted.
- Philippines** : All components are listed or exempted.
- Republic of Korea** : All components are listed or exempted.

<p>Date of issue/Date of revision : 6/5/2019</p>	<p>Date of previous issue : 4/30/2015</p>	<p>Version : 2</p>	<p>11/14</p>
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Hydrofluorosilicic Acid

Section 15. Regulatory information

Taiwan : All components are listed or exempted.
Turkey : Not determined.

U.S. Federal Regulations: : **TSCA 8(a) CDR Exempt/Partial exemption:** Not determined
TSCA 8(b) Active inventory: All components are listed or exempted.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304 Composition/information on ingredients

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Immediate (acute) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard.
Fluorosilicic acid	≥10 - ≤25	No.	No.	No.	Yes.	No.

State regulations

Massachusetts : The following components are listed: Hydrofluorosilicic Acid
New York : None of the components are listed.
New Jersey : The following components are listed: Silicofluoric acid; Fluorosilicic acid
Pennsylvania : None of the components are listed.
California Prop. 65 : This product, as manufactured, does NOT contain any substance in concentrations known to the state of California to cause cancer, birth defects or other reproductive harm. Nutrien cannot guarantee the downstream compliance of any product once out of Nutrien custody.

Section 16. Other information

History

Date of issue/Date of revision : 6/5/2019

Date of previous issue : 4/30/2015

Version : 2

Indicates information that has changed from previously issued version.
 General format change.

Date of issue/Date of revision : 6/5/2019 **Date of previous issue** : 4/30/2015 **Version** : 2 12/14

Hydrofluorosilicic Acid

Section 16. Other information

Key to abbreviations

- : ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IATA = International Air Transport Association
- IBC = Intermediate Bulk Container
- IMDG = International Maritime Dangerous Goods
- LogPow = logarithm of the octanol/water partition coefficient
- MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
- UN = United Nations
- HPR = Hazardous Products Regulations

Procedure used to derive the classification

Classification	Justification
CORROSIVE TO METALS - Category 1	Weight of evidence
ACUTE TOXICITY (oral) - Category 4	Weight of evidence
ACUTE TOXICITY (dermal) - Category 4	Weight of evidence
ACUTE TOXICITY (inhalation) - Category 4	Weight of evidence
SKIN CORROSION - Category 1B	Weight of evidence
SERIOUS EYE DAMAGE - Category 1	Weight of evidence

References

- : Transportation of Dangerous Goods Act and Clear Language Regulations, current edition at time of SDS preparation, Transport Canada;
- Hazardous Products Act and Regulations, current revision at time of SDS preparation, Health Canada;
- Domestic Substances List, current revision at time of SDS preparation, Environment Canada;
- 29 CFR Part 1910, current revision at time of SDS preparation, U.S. Occupational Safety and Health Administration;
- 40 CFR Parts 1-799, current revision at time of SDS preparation, U.S. Environmental Protection Agency;
- 49 CFR Parts 1-199, current revision at time of SDS preparation, U.S. Department of Transport;
- Mexican Official Standard NOM-018-STPS-2015, Harmonised System for the Identification and Communication of Hazards and Risks by Hazardous Chemicals in the Workplace;
- NORMA Oficial Mexicana NOM-010-STPS-2014, Agentes químicos contaminantes del ambiente laboral-Reconocimiento, evaluación y control.
- Mexican Official Standard NOM-002-SCT / 2011, List of the most commonly transported hazardous substances and materials;
- Threshold Limit Values for Chemical Substances, current edition at time of SDS preparation, American Conference of Governmental Industrial Hygienists;
- NFPA 400, National Fire Codes, National Fire Protection Association, current edition at time of SDS preparation;
- NFPA 704, National Fire Codes, National Fire Protection Association, current edition at time of SDS preparation;
- Corrosion Data Survey, Sixth Edition, 1985, National Association of Corrosion Engineers;
- ERG 2016, Emergency Response Guidebook, U.S. Department of Transport, Transport Canada, and the Secretariat of Transportation and Communications of Mexico
- Hazardous Substances Data Bank, current revision at time of SDS preparation, National Library of Medicine, Bethesda, Maryland
- Integrated Risk Information System, current revision at time of SDS preparation, U.S. Environmental Protection Agency, Washington, D.C.
- Pocket Guide to Chemical Hazards, current revision at time of SDS preparation, National Institute for Occupational Safety and Health, Cincinnati, Ohio ;
- Agency for Toxic Substances and Disease Registry Databank, current revision at time of SDS preparation, U.S. Department of Health and Human Services, Atlanta, Georgia
- National Toxicology Program, Report on Carcinogens, Division of the National Institute of Environmental Health Sciences, Research Triangle Park, North Carolina.

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Hydrofluorosilicic Acid

Section 16. Other information

Registry of Toxic Effects of Chemical Substances. National Institute for Occupational Safety and Health, Cincinnati, Ohio
California Code of Regulations, Title 27, Div 4, Chapter 1, Proposition 65 Aug 30, 2018 rev and current updates

[Notice to reader](#)

DISCLAIMER AND LIMITATION OF LIABILITY

The information and recommendations contained in this Safety Data Sheet ("SDS") relate only to the specific material referred to herein (the "Material") and do not relate to the use of such Material in combination with any other material or process. The information and recommendations contained herein are believed to be current and correct as of the date of this SDS. **HOWEVER, THE INFORMATION AND RECOMMENDATIONS ARE PRESENTED WITHOUT WARRANTY, REPRESENTATION OR LICENSE OF ANY KIND, EXPRESS OR IMPLIED, WITH RESPECT TO THEIR ACCURACY, CORRECTNESS OR COMPLETENESS, AND THE SELLER, SUPPLIER AND MANUFACTURER OF THE MATERIAL AND THEIR RESPECTIVE AFFILIATES (COLLECTIVELY, THE "SUPPLIER") DISCLAIM ALL LIABILITY FOR RELIANCE ON SUCH INFORMATION AND RECOMMENDATIONS.** This SDS is not a guarantee of safety. A buyer or user of the Material (a "Recipient") is responsible for ensuring that it has all current information necessary to safely use the Material for its specific purpose.

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INDUSTRIAL PRODUCTS

Product Name: **Hydrofluorosilicic Acid (HFSA)**

23% H₂SiF₆

Grade: **Industrial**

Order Code: **HFSA**

SDS No.: **217**

Source: Aurora

Alternate Names: Fluorosilicic Acid, FSA

page 1 of 1

TYPICAL ANALYSIS	TYPICAL	GUARANTEED
HFSA, as H ₂ SiF ₆	24.1	23.0 min.
H ₂ SiF ₆ , as F	19.1	
Heavy Metals, as lead (Pb)	<0.02%	
Phosphates, as P ₂ O ₅	0.2	
Lead, as Pb	1.0 ppm	
Iron, as Fe ₂ O ₃	70 ppm	
Iodide, as I	16 ppm	
Arsenic, as As	6.0 ppm	

PHYSICAL DATA	TYPICAL	GUARANTEE
Appearance	Water White to Straw Yellow	
Specific Gravity @ 75°F	1.23	
Weight, lbs/gal @ 75°F	10.3	

**CITY OF FORT LAUDERDALE
GENERAL CONDITIONS**

These instructions and conditions are standard for all contracts for commodities or services issued through the City of Fort Lauderdale Procurement Services Division. The City may delete, supersede, or modify any of these standard instructions for a particular contract by indicating such change in the Invitation to Bid (ITB) Special Conditions, Technical Specifications, Instructions, Proposal Pages, Addenda, and Legal Advertisement. In this general conditions document, Invitation to Bid (ITB), Request for Qualifications (RFQ), and Request for Proposal (RFP) are interchangeable.

PART I BIDDER PROPOSAL PAGE(S) CONDITIONS:

- 1.01 BIDDER ADDRESS:** The City maintains automated vendor address lists that have been generated for each specific Commodity Class item through our bid issuing service, BidSync. Notices of Invitations to Bid (ITB'S) are sent by e-mail to the selection of bidders who have fully registered with BidSync or faxed (if applicable) to every vendor on those lists, who may then view the bid documents online. Bidders who have been informed of a bid's availability in any other manner are responsible for registering with BidSync in order to view the bid documents. There is no fee for doing so. If you wish bid notifications be provided to another e-mail address or fax, please contact BidSync. If you wish purchase orders sent to a different address, please so indicate in your bid response. If you wish payments sent to a different address, please so indicate on your invoice.
- 1.02 DELIVERY:** Time will be of the essence for any orders placed as a result of this ITB. The City reserves the right to cancel any orders, or part thereof, without obligation if delivery is not made in accordance with the schedule specified by the Bidder and accepted by the City.
- 1.03 PACKING SLIPS:** It will be the responsibility of the awarded Contractor, to attach all packing slips to the OUTSIDE of each shipment. Packing slips must provide a detailed description of what is to be received and reference the City of Fort Lauderdale purchase order number that is associated with the shipment. Failure to provide a detailed packing slip attached to the outside of shipment may result in refusal of shipment at Contractor's expense.
- 1.04 PAYMENT TERMS AND CASH DISCOUNTS:** Payment terms, unless otherwise stated in this ITB, will be considered to be net 45 days after the date of satisfactory delivery at the place of acceptance and receipt of correct invoice at the office specified, whichever occurs last. Bidder may offer cash discounts for prompt payment but they will not be considered in determination of award. If a Bidder offers a discount, it is understood that the discount time will be computed from the date of satisfactory delivery, at the place of acceptance, and receipt of correct invoice, at the office specified, whichever occurs last.
- 1.05 TOTAL BID DISCOUNT:** If Bidder offers a discount for award of all items listed in the bid, such discount shall be deducted from the total of the firm net unit prices bid and shall be considered in tabulation and award of bid.
- 1.06 BIDS FIRM FOR ACCEPTANCE:** Bidder warrants, by virtue of bidding, that the bid and the prices quoted in the bid will be firm for acceptance by the City for a period of one hundred twenty (120) days from the date of bid opening unless otherwise stated in the ITB.
- 1.07 VARIANCES:** For purposes of bid evaluation, Bidder's must indicate any variances, no matter how slight, from ITB General Conditions, Special Conditions, Specifications or Addenda in the space provided in the ITB. No variations or exceptions by a Bidder will be considered or deemed a part of the bid submitted unless such variances or exceptions are listed in the bid and referenced in the space provided on the bidder proposal pages. If variances are not stated, or referenced as required, it will be assumed that the product or service fully complies with the City's terms, conditions, and specifications.
- By receiving a bid, City does not necessarily accept any variances contained in the bid. All variances submitted are subject to review and approval by the City. If any bid contains material variances that, in the City's sole opinion, make that bid conditional in nature, the City reserves the right to reject the bid or part of the bid that is declared by the City as conditional.
- 1.08 NO BIDS:** If you do not intend to bid please indicate the reason, such as insufficient time to respond, do not offer product or service, unable to meet specifications, schedule would not permit, or any other reason, in the space provided in this ITB. Failure to bid or return no bid comments prior to the bid due and opening date and time, indicated in this ITB, may result in your firm being deleted from our Bidder's registration list for the Commodity Class Item requested in this ITB.
- 1.09 MINORITY AND WOMEN BUSINESS ENTERPRISE PARTICIPATION AND BUSINESS DEFINITIONS:** The City of Fort Lauderdale wants to increase the participation of Minority Business Enterprises (MBE), Women Business Enterprises (WBE), and Small Business Enterprises (SBE) in its procurement activities. If your firm qualifies in accordance with the below definitions please indicate in the space provided in this ITB.

Minority Business Enterprise (MBE) "A Minority Business" is a business enterprise that is owned or controlled by one or more socially or economically disadvantaged persons. Such disadvantage may arise from cultural, racial, chronic economic circumstances or background or other similar cause. Such persons include, but are not limited to: Blacks, Hispanics, Asian Americans, and Native Americans.

The term "Minority Business Enterprise" means a business at least 51 percent of which is owned by minority group members or, in the case of a publicly owned business, at least 51 percent of the stock of which is owned by minority group members. For the purpose of the preceding sentence, minority group members are citizens of the United States who include, but are not limited to: Blacks, Hispanics, Asian Americans, and Native Americans.

Women Business Enterprise (WBE) a "Women Owned or Controlled Business" is a business enterprise at least 51 percent of which is owned by females or, in the case of a publicly owned business, at least 51 percent of the stock of which is owned by females.

Small Business Enterprise (SBE) "Small Business" means a corporation, partnership, sole proprietorship, or other legal entity formed for the purpose of making a profit, which is independently owned and operated, has either fewer than 100 employees or less than \$1,000,000 in annual gross receipts.

BLACK, which includes persons having origins in any of the Black racial groups of Africa.

WHITE, which includes persons whose origins are Anglo-Saxon and Europeans and persons of Indo-European decent including Pakistani and East Indian.

HISPANIC, which includes persons of Mexican, Puerto Rican, Cuban, Central and South American, or other Spanish culture or origin, regardless of race.

NATIVE AMERICAN, which includes persons whose origins are American Indians, Eskimos, Aleuts, or Native Hawaiians.

ASIAN AMERICAN, which includes persons having origin in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands.

1.10 MINORITY-WOMEN BUSINESS ENTERPRISE PARTICIPATION

It is the desire of the City of Fort Lauderdale to increase the participation of minority (MBE) and women-owned (WBE) businesses in its contracting and procurement programs. While the City does not have any preference or set aside programs in place, it is committed to a policy of equitable participation for these firms. Proposers are requested to include in their proposals a narrative describing their past accomplishments and intended actions in this area. If proposers are considering minority or women owned enterprise participation in their proposal, those firms, and their specific duties have to be identified in the proposal. If a proposer is considered for award, he or she will be asked to meet with City staff so that the intended MBE/WBE participation can be formalized and included in the subsequent contract.

1.11 SCRUTINIZED COMPANIES

As to any contract for goods or services of \$1 million or more and as to the renewal of any contract for goods or services of \$1 million or more, subject to *Odebrecht Construction, Inc., v. Prasad*, 876 F.Supp.2d 1305 (S.D. Fla. 2012), affirmed, *Odebrecht Construction, Inc., v. Secretary, Florida Department of Transportation*, 715 F.3d 1268 (11th Cir. 2013), with regard to the "Cuba Amendment," the Contractor certifies that it is not on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, and that it does not have business operations in Cuba or Syria, as provided in section 287.135, Florida Statutes (2019), as may be amended or revised. As to any contract for goods or services of any amount and as to the renewal of any contract for goods or services of any amount, the Contractor certifies that it is not on the Scrutinized Companies that Boycott Israel List created pursuant to Section 215.4725, Florida Statutes (2019), and that it is not engaged in a boycott of Israel. The City may terminate this Agreement at the City's option if the Contractor is found to have submitted a false certification as provided under subsection (5) of section 287.135, Florida Statutes (2019), as may be amended or revised, or been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List or the Scrutinized Companies that Boycott Israel List created pursuant to Section 215.4725, Florida Statutes (2019), or is engaged in a boycott of Israel, or has been engaged in business operations in Cuba or Syria, as defined in Section 287.135, Florida Statutes (2019), as may be amended or revised.

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1.12 DEBARRED OR SUSPENDED BIDDERS OR PROPOSERS

The bidder or proposer certifies, by submission of a response to this solicitation, that neither it nor its principals and subcontractors are presently debarred or suspended by any Federal department or agency.

Part II DEFINITIONS/ORDER OF PRECEDENCE:

2.01 BIDDING DEFINITIONS The City will use the following definitions in its general conditions, special conditions, technical specifications, instructions to bidders, addenda and any other document used in the bidding process:

INVITATION TO BID (ITB) The solicitation document used for soliciting competitive sealed bids for goods or services.

INVITATION TO NEGOTIATE (ITN) All solicitation documents, regardless of medium, whether attached to or incorporated by reference in solicitations for responses from firms that invite proposals from interested and qualified firms so the city may enter into negotiations with the firm(s) determined most capable of providing the required goods or services.

REQUEST FOR PROPOSALS (RFP) A solicitation method used for soliciting competitive sealed proposals to determine the best value among proposals for goods or services for which price may not be the prevailing factor in award of the contract, or the scope of work, specifications or contract terms and conditions may be difficult to define. Such solicitation will consider the qualifications of the proposers along with evaluation of each proposal using identified and generally weighted evaluation criteria. RFPs may include price criteria whenever feasible, at the discretion of the city.

REQUEST FOR QUALIFICATIONS (RFQ) A solicitation method used for requesting statements of qualifications in order to determine the most qualified proposer for professional services.

BID – a price and terms quote received in response to an ITB.

PROPOSAL – a proposal received in response to an RFP.

BIDDER – Person or firm submitting a Bid.

PROPOSER – Person or firm submitting a Proposal.

RESPONSIVE BIDDER – A firm who has submitted a bid, offer, quote, or response which conforms in all material respects to the competitive solicitation document and all of its requirements.

RESPONSIBLE BIDDER – A firm who is fully capable of meeting all requirements of the solicitation and subsequent contract. The respondent must possess the full capability, including financial and technical, ability, business judgment, experience, qualifications, facilities, equipment, integrity, capability, and reliability, in all respects to perform fully the contract requirements and assure good faith performance as determined by the city.

FIRST RANKED PROPOSER – That Proposer, responding to a City RFP, whose Proposal is deemed by the City, the most advantageous to the City after applying the evaluation criteria contained in the RFP.

SELLER – Successful Bidder or Proposer who is awarded a Purchase Order or Contract to provide goods or services to the City.

CONTRACTOR – Any firm having a contract with the city. Also referred to as a "Vendor".

CONTRACT – All types of agreements, including purchase orders, for procurement of supplies, services, and construction, regardless of what these agreements may be called.

CONSULTANT – A firm providing professional services for the city.

- 2.02 SPECIAL CONDITIONS:** Any and all Special Conditions contained in this ITB that may be in variance or conflict with these General Conditions shall have precedence over these General Conditions. If no changes or deletions to General Conditions are made in the Special Conditions, then the General Conditions shall prevail in their entirety,

PART III BIDDING AND AWARD PROCEDURES:

- 3.01 SUBMISSION AND RECEIPT OF BIDS:** To receive consideration, bids must be received prior to the bid opening date and time. Unless otherwise specified, Bidders should use the proposal forms provided by the City. These forms may be duplicated, but failure to use the forms may cause the bid to be rejected. Any erasures or corrections on the bid must be made in ink and initialed by Bidder in ink. All information submitted by the Bidder shall be printed, typewritten or filled in with pen and ink. Bids shall be signed in ink. Separate bids must be submitted for each ITB issued by the City in separate sealed envelopes properly marked. When a particular ITB or RFP requires multiple copies of bids or proposals they may be included in a single envelope or package properly sealed and identified. Only send bids via facsimile transmission (FAX) if the ITB specifically states that bids sent via FAX will be considered. If such a statement is not included in the ITB, bids sent via FAX will be rejected. Bids will be publicly opened in the Procurement Office, or other designated area, in the presence of Bidders, the public, and City staff. Bidders and the public are invited and encouraged to attend bid openings. Bids will be tabulated and made available for review by Bidder's and the public in accordance with applicable regulations.
- 3.02 MODEL NUMBER CORRECTIONS:** If the model number for the make specified in this ITB is incorrect, or no longer available and replaced with an updated model with new specifications, the Bidder shall enter the correct model number on the bidder proposal page. In the case of an updated model with new specifications, Bidder shall provide adequate information to allow the City to determine if the model bid meets the City's requirements.
- 3.03 PRICES QUOTED:** Deduct trade discounts, and quote firm net prices. Give both unit price and extended total. In the case of a discrepancy in computing the amount of the bid, the unit price quoted will govern. All prices quoted shall be F.O.B. destination, freight prepaid (Bidder pays and bears freight charges, Bidder owns goods in transit and files any claims), unless otherwise stated in Special Conditions. Each item must be bid separately. No attempt shall be made to tie any item or items contained in the ITB with any other business with the City.
- 3.04 TAXES:** The City of Fort Lauderdale is exempt from Federal Excise and Florida Sales taxes on direct purchase of tangible property. Exemption **number for EIN is 59-6000319, and State Sales tax exemption number is 85-8013875578C-1.**
- 3.05 WARRANTIES OF USAGE:** Any quantities listed in this ITB as estimated or projected are provided for tabulation and information purposes only. No warranty or guarantee of quantities is given or implied. It is understood that the Contractor will furnish the City's needs as they arise.
- 3.06 APPROVED EQUAL:** When the technical specifications call for a brand name, manufacturer, make, model, or vendor catalog number with acceptance of APPROVED EQUAL, it shall be for the purpose of establishing a level of quality and features desired and acceptable to the City. In such cases, the City will be receptive to any unit that would be considered by qualified City personnel as an approved equal. In that the specified make and model represent a level of quality and features desired by the City, the Bidder must state clearly in the bid any variance from those specifications. It is the Bidder's responsibility to provide adequate information, in the bid, to enable the City to ensure that the bid meets the required criteria. If adequate information is not submitted with the bid, it may be rejected. The City will be the sole judge in determining if the item bid qualifies as an approved equal.
- 3.07 MINIMUM AND MANDATORY TECHNICAL SPECIFICATIONS:** The technical specifications may include items that are considered minimum, mandatory, or required. If any Bidder is unable to meet or exceed these items, and feels that the technical specifications are overly restrictive, the bidder must notify the Procurement Services Division immediately. Such notification must be received by the Procurement Services Division prior to the deadline contained in the ITB, for questions of a material nature, or prior to five (5) days before bid due and open date, whichever occurs first. If no such notification is received prior to that deadline, the City will consider the technical specifications to be acceptable to all bidders.
- 3.08 MISTAKES:** Bidders are cautioned to examine all terms, conditions, specifications, drawings, exhibits, addenda, delivery instructions and special conditions pertaining to the ITB. Failure of the Bidder to examine all pertinent documents shall not entitle the bidder to any relief from the conditions imposed in the contract.
- 3.09 SAMPLES AND DEMONSTRATIONS:** Samples or inspection of product may be requested to determine suitability. Unless otherwise specified in Special Conditions, samples shall be requested after the date of bid opening, and if requested should be received by the City within seven (7) working days of request. Samples, when requested, must be furnished free of expense to the City and if not used in testing or destroyed, will upon request of the Bidder, be returned within thirty (30) days of bid award at Bidder's expense. When required, the City may request full demonstrations of units prior to award. When such demonstrations are requested, the Bidder shall respond promptly and arrange a demonstration at a convenient location. Failure to provide samples or demonstrations as specified by the City may result in rejection of a bid.
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- 3.10 LIFE CYCLE COSTING:** If so specified in the ITB, the City may elect to evaluate equipment proposed on the basis of total cost of ownership. In using Life Cycle Costing, factors such as the following may be considered: estimated useful life, maintenance costs, cost of supplies, labor intensity, energy usage, environmental impact, and residual value. The City reserves the right to use those or other applicable criteria, in its sole opinion that will most accurately estimate total cost of use and ownership.
- 3.11 BIDDING ITEMS WITH RECYCLED CONTENT:** In addressing environmental concerns, the City of Fort Lauderdale encourages Bidders to submit bids or alternate bids containing items with recycled content. When submitting bids containing items with recycled content, Bidder shall provide documentation adequate for the City to verify the recycled content. The City prefers packaging consisting of materials that are degradable or able to be recycled. When specifically stated in the ITB, the City may give preference to bids containing items manufactured with recycled material or packaging that is able to be recycled.

- 3.12 USE OF OTHER GOVERNMENTAL CONTRACTS:** The City reserves the right to reject any part or all of any bids received and utilize other available governmental contracts, if such action is in its best interest.
- 3.13 QUALIFICATIONS/INSPECTION:** Bids will only be considered from firms normally engaged in providing the types of commodities/services specified herein. The City reserves the right to inspect the Bidder's facilities, equipment, personnel, and organization at any time, or to take any other action necessary to determine Bidder's ability to perform. The Procurement Director reserves the right to reject bids where evidence or evaluation is determined to indicate inability to perform.
- 3.14 BID SURETY:** If Special Conditions require a bid security, it shall be submitted in the amount stated. A bid security can be in the form of a bid bond or cashier's check. Bid security will be returned to the unsuccessful bidders as soon as practicable after opening of bids. Bid security will be returned to the successful bidder after acceptance of the performance bond, if required; acceptance of insurance coverage, if required; and full execution of contract documents, if required; or conditions as stated in Special Conditions.
- 3.15 PUBLIC RECORDS/TRADE SECRETS/COPYRIGHT:** The Proposer's response to the RFP is a public record pursuant to Florida law, which is subject to disclosure by the City under the State of Florida Public Records Law, Florida Statutes Chapter 119.07 ("Public Records Law"). The City shall permit public access to all documents, papers, letters or other material submitted in connection with this RFP and the Contract to be executed for this RFP, subject to the provisions of Chapter 119.07 of the Florida Statutes.

Any language contained in the Proposer's response to the RFP purporting to require confidentiality of any portion of the Proposer's response to the RFP, except to the extent that certain information is in the City's opinion a Trade Secret pursuant to Florida law, shall be void. If a Proposer submits any documents or other information to the City which the Proposer claims is Trade Secret information and exempt from Florida Statutes Chapter 119.07 ("Public Records Laws"), the Proposer shall clearly designate that it is a Trade Secret and that it is asserting that the document or information is exempt. The Proposer must specifically identify the exemption being claimed under Florida Statutes 119.07. The City shall be the final arbiter of whether any information contained in the Proposer's response to the RFP constitutes a Trade Secret. The city's determination of whether an exemption applies shall be final, and the proposer agrees to defend, indemnify, and hold harmless the City and the City's officers, employees, and agents, against any loss or damages incurred by any person or entity as a result of the City's treatment of records as public records. In addition, the proposer agrees to defend, indemnify, and hold harmless the City and the City's officers, employees, and agents, against any loss or damages incurred by any person or entity as a result of the City's treatment of records as exempt from disclosure or confidential. Proposals bearing copyright symbols or otherwise purporting to be subject to copyright protection in full or in part may be rejected. The proposer authorizes the City to publish, copy, and reproduce any and all documents submitted to the City bearing copyright symbols or otherwise purporting to be subject to copyright protection.

EXCEPT FOR CLEARLY MARKED PORTIONS THAT ARE BONA FIDE TRADE SECRETS PURSUANT TO FLORIDA LAW, DO NOT MARK YOUR RESPONSE TO THE RFP AS PROPRIETARY OR CONFIDENTIAL. DO NOT MARK YOUR RESPONSE TO THE RFP OR ANY PART THEREOF AS COPYRIGHTED.

- 3.16 PROHIBITION OF INTEREST:** No contract will be awarded to a bidding firm who has City elected officials, officers or employees affiliated with it, unless the bidding firm has fully complied with current Florida State Statutes and City Ordinances relating to this issue. Bidders must disclose any such affiliation. Failure to disclose any such affiliation will result in disqualification of the Bidder and removal of the Bidder from the City's bidder lists and prohibition from engaging in any business with the City.
- 3.17 RESERVATIONS FOR AWARD AND REJECTION OF BIDS:** The City reserves the right to accept or reject any or all bids, part of bids, and to waive minor irregularities or variations to specifications contained in bids, and minor irregularities in the bidding process. The City also reserves the right to award the contract on a split order basis, lump sum basis, individual item basis, or such combination as shall best serve the interest of the City. The City reserves the right to make an award to the responsive and responsible bidder whose product or service meets the terms, conditions, and specifications of the ITB and whose bid is considered to best serve the City's interest. In determining the responsiveness of the offer and the responsibility of the Bidder, the following shall be considered when applicable: the ability, capacity and skill of the Bidder to perform as required; whether the Bidder can perform promptly, or within the time specified, without delay or interference; the character, integrity, reputation, judgment, experience and efficiency of the Bidder; the quality of past performance by the Bidder; the previous and existing compliance by the Bidder with related laws and ordinances; the sufficiency of the Bidder's financial resources; the availability, quality and adaptability of the Bidder's supplies or services to the required use; the ability of the Bidder to provide future maintenance, service or parts; the number and scope of conditions attached to the bid.

If the ITB provides for a contract trial period, the City reserves the right, in the event the selected bidder does not perform satisfactorily, to award a trial period to the next ranked bidder or to award a contract to the next ranked bidder, if that bidder has successfully provided services to the City in the past. This procedure to continue until a bidder is selected or the contract is re-bid, at the sole option of the City.

- 3.18 LEGAL REQUIREMENTS:** Applicable provisions of all federal, state, county laws, and local ordinances, rules and regulations, shall govern development, submittal and evaluation of all bids received in response hereto and shall govern any and all claims and disputes which may arise between person(s) submitting a bid response hereto and the City by and through its officers, employees and authorized representatives, or any other person, natural or otherwise; and lack of knowledge by any bidder shall not constitute a cognizable defense against the legal effect thereof.
- 3.19 BID PROTEST PROCEDURE:** Any proposer or bidder who is not recommended for award of a contract and who alleges a failure by the city to follow the city's procurement ordinance or any applicable law may protest to the chief procurement officer, by delivering a letter of protest to the director of finance within five (5) days after a notice of intent to award is posted on the city's web site at the following url: <https://www.fortlauderdale.gov/departments/finance/procurement-services/notices-of-intent-to-award>

The complete protest ordinance may be found on the city's web site at the following url: https://library.municode.com/fl/fort_lauderdale/codes/code_of_ordinances?nodeid=coor_ch2ad_artvfi_div2pr_s2-182direpr

PART IV BONDS AND INSURANCE

- 4.01 PERFORMANCE BOND:** If a performance bond is required in Special Conditions, the Contractor shall within fifteen (15) working days after notification of award, furnish to the City a Performance Bond, payable to the City of Fort Lauderdale, Florida, in the face amount specified in Special Conditions as surety for faithful

performance under the terms and conditions of the contract. If the bond is on an annual coverage basis, renewal for each succeeding year shall be submitted to the City thirty (30) days prior to the termination date of the existing Performance Bond. The Performance Bond must be executed by a surety company of recognized standing, authorized to do business in the State of Florida and having a resident agent.

Acknowledgement and agreement is given by both parties that the amount herein set for the Performance Bond is not intended to be nor shall be deemed to be in the nature of liquidated damages nor is it intended to limit the liability of the Contractor to the City in the event of a material breach of this Agreement by the Contractor.

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4.02 INSURANCE: The Contractor shall assume full responsibility and expense to obtain all necessary insurance as required by City or specified in Special Conditions.

The Contractor shall provide to the Procurement Services Division original certificates of coverage and receive notification of approval of those certificates by the City's Risk Manager prior to engaging in any activities under this contract. The Contractor's insurance is subject to the approval of the City's Risk Manager. The certificates must list the City as an ADDITIONAL INSURED for General Liability Insurance and shall have no less than thirty (30) days written notice of cancellation or material change. Further modification of the insurance requirements may be made at the sole discretion of the City's Risk Manager if circumstances change or adequate protection of the City is not presented. Bidder, by submitting the bid, agrees to abide by such modifications.

PART V PURCHASE ORDER AND CONTRACT TERMS:

5.01 COMPLIANCE WITH SPECIFICATIONS, LATE DELIVERIES/PENALTIES: Items offered may be tested for compliance with bid specifications. Items delivered which do not conform to bid specifications may be rejected and returned at Contractor's expense. Any violation resulting in contract termination for cause or delivery of items not conforming to specifications, or late delivery may also result in:

- Bidder's name being removed from the City's bidder's mailing list for a specified period and Bidder will not be recommended for any award during that period.
- All City Departments being advised to refrain from doing business with the Bidder.
- All other remedies in law or equity.

5.02 ACCEPTANCE, CONDITION, AND PACKAGING: The material delivered in response to ITB award shall remain the property of the Seller until a physical inspection is made and the material accepted to the satisfaction of the City. The material must comply fully with the terms of the ITB, be of the required quality, new, and the latest model. All containers shall be suitable for storage and shipment by common carrier, and all prices shall include standard commercial packaging. The City will not accept substitutes of any kind. Any substitutes or material not meeting specifications will be returned at the Bidder's expense. Payment will be made only after City receipt and acceptance of materials or services.

5.03 SAFETY STANDARDS: All manufactured items and fabricated assemblies shall comply with applicable requirements of the Occupation Safety and Health Act of 1970 as amended.

5.04 ASBESTOS STATEMENT: All material supplied must be 100% asbestos free. Bidder, by virtue of bidding, certifies that if awarded any portion of the ITB the bidder will supply only material or equipment that is 100% asbestos free.

5.05 OTHER GOVERNMENTAL ENTITIES: If the Bidder is awarded a contract as a result of this ITB, the bidder may, if the bidder has sufficient capacity or quantities available, provide to other governmental agencies, so requesting, the products or services awarded in accordance with the terms and conditions of the ITB and resulting contract. Prices shall be F.O.B. delivered to the requesting agency.

5.06 VERBAL INSTRUCTIONS PROCEDURE: No negotiations, decisions, or actions shall be initiated or executed by the Contractor as a result of any discussions with any City employee. Only those communications which are in writing from an authorized City representative may be considered. Only written communications from Contractors, which are assigned by a person designated as authorized to bind the Contractor, will be recognized by the City as duly authorized expressions on behalf of Contractors.

5.07 INDEPENDENT CONTRACTOR: The Contractor is an independent contractor under this Agreement. Personal services provided by the Proposer shall be by employees of the Contractor and subject to supervision by the Contractor, and not as officers, employees, or agents of the City. Personnel policies, tax responsibilities, social security, health insurance, employee benefits, procurement policies unless otherwise stated in this ITB, and other similar administrative procedures applicable to services rendered under this contract shall be those of the Contractor.

5.08 INDEMNITY/HOLD HARMLESS AGREEMENT: Contractor shall protect and defend at Contractor's expense, counsel being subject to the City's approval, and indemnify and hold harmless the City and the City's officers, employees, volunteers, and agents from and against any and all losses, penalties, fines, damages, settlements, judgments, claims, costs, charges, expenses, or liabilities, including any award of attorney fees and any award of costs, in connection with or arising directly or indirectly out of any act or omission by the Contractor or by any officer, employee, agent, invitee, subcontractor, or sublicensee of the Contractor. Without limiting the foregoing, any and all such claims, suits, or other actions relating to personal injury, death, damage to property, defects in materials or workmanship, actual or alleged violations of any applicable statute, ordinance, administrative order, rule or regulation, or decree of any court shall be included in the indemnity hereunder.

5.09 TERMINATION FOR CAUSE: If, through any cause, the Contractor shall fail to fulfill in a timely and proper manner its obligations under this Agreement, or if the Contractor shall violate any of the provisions of this Agreement, the City may upon written notice to the Contractor terminate the right of the Contractor to proceed under this Agreement, or with such part or parts of the Agreement as to which there has been default, and may hold the Contractor liable for any damages caused to the City by reason of such default and termination. In the event of such termination, any completed services performed by the Contractor under this Agreement shall, at the option of the City, become the City's property and the Contractor shall be entitled to receive equitable compensation for any work completed to the satisfaction of

the City. The Contractor, however, shall not be relieved of liability to the City for damages sustained by the City by reason of any breach of the Agreement by the Contractor, and the City may withhold any payments to the Contractor for the purpose of setoff until such time as the amount of damages due to the City from the Contractor can be determined.

- 5.10 TERMINATION FOR CONVENIENCE:** The City reserves the right, in the City's best interest as determined by the City, to cancel any contract by giving written notice to the Contractor thirty (30) days prior to the effective date of such cancellation.
- 5.11 CANCELLATION FOR UNAPPROPRIATED FUNDS:** The obligation of the City for payment to a Contractor is limited to the availability of funds appropriated in a current fiscal period, and continuation of the contract into a subsequent fiscal period is subject to appropriation of funds, unless otherwise authorized by law.
- 5.12 RECORDS/AUDIT:** The Contractor shall maintain during the term of the contract all books of account, reports and records in accordance with generally accepted accounting practices and standards directly related to this contract. The Contractor agrees to make available to the City Auditor or the City Auditor's designee, during normal business hours and in Broward, Miami-Dade or Palm Beach Counties, all books of account, reports, and records relating to this contract. The Contractor shall retain all books of account, reports, and records relating to this contract for the duration of the contract and for three years after the final payment under this Agreement, until all pending audits, investigations or litigation matters relating to the contract are closed, or until expiration of the records retention period prescribed by Florida law or the records retention schedules adopted by the Division of Library and Information Services of the Florida Department of State, whichever is later.
- 5.13 PERMITS, TAXES, LICENSES:** The successful Contractor shall, at his/her/its own expense, obtain all necessary permits, pay all licenses, fees and taxes, required to comply with all local ordinances, state and federal laws, rules and regulations applicable to business to be carried out under this contract.
- 5.14 LAWS/ORDINANCES:** The Contractor shall observe and comply with all Federal, state, local and municipal laws, ordinances rules and regulations that would apply to this contract.

NON-DISCRIMINATION: The Contractor shall not, in any of its activities, including employment, discriminate against any individual on the basis of race, color, national origin, age, religion, creed, sex, disability, sexual orientation, gender, gender identity, gender expression, marital status, or any other protected classification as defined by applicable law.

1. The Contractor certifies and represents that the Contractor will comply with Section 2-187, Code of Ordinances of the City of Fort Lauderdale, Florida, (2019), as may be amended or revised, ("Section 2-187"), during the entire term of this Agreement.
2. The failure of the Contractor to comply with Section 2-187 shall be deemed to be a material breach of this Agreement, entitling the City to pursue any remedy stated below or any remedy provided under applicable law.
3. The City may terminate this Agreement if the Contractor fails to comply with Section 2-187.
4. The City may retain all monies due or to become due until the Contractor complies with Section 2-187.
5. The Contractor may be subject to debarment or suspension proceedings. Such proceedings will be consistent with the procedures in section 2-183 of the Code of Ordinances of the City of Fort Lauderdale, Florida.

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- 5.15 UNUSUAL CIRCUMSTANCES:** If during a contract term where costs to the City are to remain firm or adjustments are restricted by a percentage or CPI cap, unusual circumstances that could not have been foreseen by either party of the contract occur, and those circumstances significantly affect the Contractor's cost in providing the required prior items or services, then the Contractor may request adjustments to the costs to the City to reflect the changed circumstances. The circumstances must be beyond the control of the Contractor, and the requested adjustments must be fully documented. The City may, after examination, refuse to accept the adjusted costs if they are not properly documented, increases are considered to be excessive, or decreases are considered to be insufficient. In the event the City does not wish to accept the adjusted costs and the matter cannot be resolved to the satisfaction of the City, the City will reserve the following options:
1. The contract can be canceled by the City upon giving thirty (30) days written notice to the Contractor with no penalty to the City or Contractor. The Contractor shall fill all City requirements submitted to the Contractor until the termination date contained in the notice.
 2. The City requires the Contractor to continue to provide the items and services at the firm fixed (non-adjusted) cost until the termination of the contract term then in effect.
 3. If the City, in its interest and in its sole opinion, determines that the Contractor in a capricious manner attempted to use this section of the contract to relieve Contractor of a legitimate obligation under the contract, and no unusual circumstances had occurred, the City reserves the right to take any and all action under law or equity. Such action shall include, but not be limited to, declaring the Contractor in default and disqualifying Contractor from receiving any business from the City for a stated period of time.

If the City does agree to adjusted costs, these adjusted costs shall not be invoiced to the City until the Contractor receives notice in writing signed by a person authorized to bind the City in such matters.

- 5.16 ELIGIBILITY:** If applicable, the Contractor must first register with the Florida Department of State in accordance with Florida Statutes, prior to entering into a contract with the City.
- 5.17 PATENTS AND ROYALTIES:** The Contractor, without exception, shall defend, indemnify, and hold harmless the City and the City's employees, officers, employees, volunteers, and agents from and against liability of any nature and kind, including cost and expenses for or on account of any copyrighted, patented or un-patented invention, process, or article manufactured or used in the performance of the contract, including their use by the City. If the Contractor uses any design, device, or materials covered by letters, patent or copyright, it is mutually agreed and understood without exception that the bid prices shall include any and all royalties or costs arising from the use of such design, device, or materials in any way involved in the work.

- 5.18 **ASSIGNMENT:** Contractor shall not transfer or assign the performance required by this ITB without the prior written consent of the City. Any award issued pursuant to this ITB, and the monies, which may become due hereunder, are not assignable except with the prior written approval of the City Commission or the City Manager or City Manager's designee, depending on original award approval.
- 5.19 **GOVERNING LAW; VENUE:** The Contract shall be governed by and construed in accordance with the laws of the State of Florida. Venue for any lawsuit by either party against the other party or otherwise arising out of the Contract, and for any other legal proceeding, shall be in the courts in and for Broward County, Florida, or in the event of federal jurisdiction, in the Southern District of Florida.
- 5.20 **PUBLIC RECORDS:**

IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT PRRCONTRACT@FORTLAUDERDALE.GOV, 954-828-5002, CITY CLERK'S OFFICE, 100 N. ANDREWS AVENUE, FORT LAUDERDALE, FLORIDA 33301.

Contractor shall comply with public records laws, and Contractor shall:

1. Keep and maintain public records required by the City to perform the service.
2. Upon request from the City's custodian of public records, provide the City with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119, Florida Statutes (2019), as may be amended or revised, or as otherwise provided by law.
3. Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and following completion of the contract if the Contractor does not transfer the records to the City.
4. Upon completion of the Contract, transfer, at no cost, to the City all public records in possession of the Contractor or keep and maintain public records required by the City to perform the service. If the Contractor transfers all public records to the City upon completion of the Contract, the Contractor shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the Contractor keeps and maintains public records upon completion of the Contract, the Contractor shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the City, upon request from the City's custodian of public records, in a format that is compatible with the information technology systems of the City.

NON-COLLUSION STATEMENT:

By signing this offer, the vendor/contractor certifies that this offer is made independently and *free* from collusion. Vendor shall disclose below any City of Fort Lauderdale, FL officer or employee, or any relative of any such officer or employee who is an officer or director of, or has a material interest in, the vendor's business, who is in a position to influence this procurement.

Any City of Fort Lauderdale, FL officer or employee who has any input into the writing of specifications or requirements, solicitation of offers, decision to award, evaluation of offers, or any other activity pertinent to this procurement is presumed, for purposes hereof, to be in a position to influence this procurement.

For purposes hereof, a person has a material interest if they directly or indirectly own more than 5 percent of the total assets or capital stock of any business entity, or if they otherwise stand to personally gain if the contract is awarded to this vendor.

In accordance with City of Fort Lauderdale, FL Policy and Standards Manual, 6.10.8.3,

3.3. City employees may not contract with the City through any corporation or business entity in which they or their immediate family members hold a controlling financial interest (e.g. ownership of five (5) percent or more).

3.4. Immediate family members (spouse, parents and children) are also prohibited from contracting with the City subject to the same general rules.

Failure of a vendor to disclose any relationship described herein shall be reason for debarment in accordance with the provisions of the City Procurement Code.

NAME

RELATIONSHIPS

N/A

In the event the vendor does not indicate any names, the City shall interpret this to mean that the vendor has indicated that no such relationships exist.

Betty Kendall-Jones
Authorized Signature

Municipal Bid Specialist
Title

Betty Kendall-Jones
Name (Printed)

12/07/2021
Date

**CONTRACTOR'S CERTIFICATE OF COMPLIANCE WITH
NON-DISCRIMINATION PROVISIONS OF THE CONTRACT**

The completed and signed form should be returned with the Contractor's submittal. If not provided with submittal, the Contractor must submit within three business days of City's request. Contractor may be deemed non-responsive for failure to fully comply within stated timeframes.

Pursuant to City Ordinance Sec. 2-187(c), bidders must certify compliance with the Non-Discrimination provision of the ordinance.

The Contractor shall not, in any of his/her/its activities, including employment, discriminate against any individual on the basis of race, color, national origin, religion, creed, sex, disability, sexual orientation, gender, gender identity, gender expression, or marital status.

1. The Contractor certifies and represents that he/she/it will comply with Section 2-187, Code of Ordinances of the City of Fort Lauderdale, Florida, as amended by Ordinance C-18-33 (collectively, "Section 2-187").
2. The failure of the Contractor to comply with Section 2-187 shall be deemed to be a material breach of this Agreement, entitling the City to pursue any remedy stated below or any remedy provided under applicable law.
3. The City may terminate this Agreement if the Contractor fails to comply with Section 2-187.
4. The City may retain all monies due or to become due until the Contractor complies with Section 2-187.
5. The Contractor may be subject to debarment or suspension proceedings. Such proceedings will be consistent with the procedures in section 2-183 of the Code of Ordinances of the City of Fort Lauderdale, Florida.

Betty Kendall-Jones
Authorized Signature

Betty Kendall-Jones, Municipal Bid Specialist
Print Name and Title

12/7/2021
Date

E-VERIFY AFFIRMATION STATEMENT

RFP/Bid /Contract No: **Bid 12595-322**

Project Description: **Hydrofluosiiic Acid (Co-Op)**

Contractor/Proposer/Bidder acknowledges and agrees to utilize the U.S. Department of Homeland Security's E-Verify System to verify the employment eligibility of,

- (a) all persons employed by Contractor/Proposer/Bidder to perform employment duties within Florida during the term of the Contract, and,
- (b) all persons (including subcontractors/vendors) assigned by Contractor/Proposer/Bidder to perform work pursuant to the Contract.

The Contractor/Proposer/Bidder acknowledges and agrees that use of the U.S. Department of Homeland Security's E-Verify System during the term of the Contract is a condition of the Contract.

Contractor/Proposer/ Bidder Company Name: **DuBois Chemicals, Inc.**

Authorized Company Person's Signature: **Betty Kendall-Jones**

Authorized Company Person's Title: **Municipal Bid Specialist**

Date: **12/07/2021**

9/15/2020

BID/PROPOSAL CERTIFICATION

Please Note: It is the sole responsibility of the bidder to ensure that his bid is submitted electronically through www.BidSync.com prior to the bid opening date and time listed. Paper bid submittals will not be accepted. All fields below must be completed. If the field does not apply to you, please note N/A in that field.

If you are a foreign corporation, you may be required to obtain a certificate of authority from the department of state, in accordance with Florida Statute §607.1501 (visit <http://www.dos.state.fl.us/>).

Company: (Legal Registration) **DuBois Chemicals, Inc.**EIN (Optional): **80-0244824**

Address: **1717 E. Fargo Ave.**

City: **Nampa**State: **Idaho**Zip: **83687**

Telephone No.: **3855490086**FAX No.: **2084668989**Email: **betty.kendall-jones@duboischemicals.com**

Delivery: Calendar days after receipt of Purchase Order (**section 1.02 of General Conditions**):

Total Bid Discount (**section 1.05 of General Conditions**):

Check box if your firm qualifies for MBE / SBE / WBE (**section 1.09 of General Conditions**):

ADDENDUM ACKNOWLEDGEMENT - Proposer acknowledges that the following addenda have been received and are included in the proposal:

<u>Addendum No.</u>	<u>Date Issued</u>	<u>Addendum No.</u>	<u>Date Issued</u>	<u>Addendum No.</u>	<u>Date Issued</u>
1	12/01/2021				

VARIANCES: If you take exception or have variances to any term, condition, specification, scope of service, or requirement in this competitive solicitation you must specify such exception or variance in the space provided below or reference in the space provided below all variances contained on other pages within your response. Additional pages may be attached if necessary. No exceptions or variances will be deemed to be part of the response submitted unless such is listed and contained in the space provided below. The City does not, by virtue of submitting a variance, necessarily accept any variances. If no statement is contained in the below space, it is hereby implied that your response is in full compliance with this competitive solicitation. If you do not have variances, simply mark N/A. **You must also click the "Take Exception" button.**

Note:Our prices are based on a 23% quantity adjusted basis and Bulk loads a minimum of 44,000/lbs (22 tons) and LTL loads a minimum of 20,000/LBS (10 tons)

The below signatory hereby agrees to furnish the following article(s) or services at the price(s) and terms stated subject to all instructions, conditions, specifications addenda, legal advertisement, and conditions contained in the bid/proposal.

I have read all attachments including the specifications and fully understand what is required. By submitting this signed proposal, I will accept a contract if approved by the City and such acceptance covers all terms, conditions, and specifications of this bid/proposal. The below signatory also hereby agrees, by virtue of submitting or attempting to submit a response, that in no event shall the City's liability for respondent's direct, indirect, incidental, consequential, special or exemplary damages, expenses, or lost profits arising out of this competitive solicitation process, including but not limited to public advertisement, bid conferences, site visits, evaluations, oral presentations, or award proceedings exceed the amount of Five Hundred

Dollars (\$500.00). This limitation shall not apply to claims arising under any provision of indemnification or the City's protest ordinance contained in this competitive solicitation.

Submitted by:

Betty Kendall-Jones
Name (printed)

12/07/2021
Date

Betty Kendall-Jones
Signature

Municipal Bid Specialist
Title

Revised 4/28/2020

No Bids

Brenntag Mid-South Inc Transportation not available into area from Vendor

Pencco, Inc. Unable to supply at this time.

Univar USA Inc. No support and overloaded in demand for this area at this time.