

SECTION IV

**BAY AREA CHEMICAL CONSORTIUM
BID CONTRACT DOCUMENTS
FOR BID NO. 08-2025
HYDROFLUOSILICIC ACID (FLUORIDE)**

***** All of the following pages must be properly completed and submitted
for the bid to be considered complete. *****



February 20, 2025

Bay Area Clean Water Agencies
PO Box 24055, MS 702
Oakland, CA 94623

Proposal for: BID FOR HYDROFLUOSILICIC ACID (FLUORIDE) BACC, BID NO. 08-2025

To whom it may concern,

DuBois Chemicals, Inc. is in receipt of the above RFQ, due February 20, 2025 at 4:00 P.M.

We are pleased to quote on your requirements and have done so on the attached paperwork, along with the unit prices submitted through PlanetBids.

DuBois will be utilizing a third-party hauler for the deliveries of the FSA from our Terminal locations: Chemical Transfer Company, Inc., located at 3105 North El Dorado Street, Stockton, CA 95027. DuBois will deliver FSA to the Fairfax location for Marin Sonoma, and our third-party hauler will deliver to all the other locations. In response to the request for an affidavit that Chemical Transfer Company (AKA California Tank Lines) can and will deliver to the BACC agencies, please see attached letter.

DuBois Chemicals appreciates 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 black ink that reads "Andrew Paulson". The signature is fluid and cursive, with the first name "Andrew" and last name "Paulson" clearly distinguishable.

Andrew Paulson
Municipal Bid Specialist

Andrew.Paulson@duboischemicals.com
Bids@duboischemicals.com



CHEMICAL TRANSFER COMPANY, INC.

TANK TRUCK TRANSPORTATION

RAIL TRANSFER FACILITIES

PHONE (209) 466-3554

FAX (209) 466-1855

RAIL TRANSFER (209) 943-2639

RAIL TRANSFER FAX (209) 943-1440

POST OFFICE BOX 6036

•

STOCKTON, CALIFORNIA 95206

•

February 20, 2025

DuBois Chemicals, INC.

Attn: Andrew Paulson

1717 E Fargo Ave.

Nampa, ID 83687

Dear Mr. Paulson,

Chemical Transfer Company, Inc. will supply the appropriate equipment and qualified drivers to service your customer in the Bay area delivery locations for BACC.

A handwritten signature in blue ink, appearing to read 'Allen Genetti', with a long horizontal line extending to the right.

Sincerely,

Allen Genetti

CFO



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 FSA & Municipal Bids of the Corporation as well as Betty Kendall-Jones and Andrew Paulson as Municipal Bids Specialists.
2. Laura Lanthier, Betty Kendall-Jones and Andrew Paulson 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.

A handwritten signature in blue ink, appearing to read "Jeff W. Welsh", is written over a horizontal line.

Jeff W. Welsh
President and CEO

02- APR- 2024

Date



Company Information 2025

Company Name: DuBois Chemicals, Inc.
Company Corporate Address: 3630 E. Kemper Rd.
Sharonville, 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@duboischemicals.com

Andrew Paulson
Municipal Bid Specialist
Phone: (253) 339-1425
Email: Andrew.Paulson@duboischemicals.com

Laura Lanthier - Manager, FSA & Municipal Bids
Phone: (208) 932-6615
Email: Laura.Lanthier@duboischemicals.com

<u>Fluorosilicic Acid Order Placement:</u> Email: FSA@duboischemicals.com Customer Service Office: (208) 466-8437 Fax: (208) 466-8989 Veronica Childers - Customer/FSA Service Mgr. Direct Line: (208) 541-2812 Veronica.Childers@duboischemicals.com Alternate Contact: John Wiemer Direct Line: (208) 830-1436 John.Wiemer@duboischemicals.com	<u>Soda Ash and Other Chemical Order Placement:</u> Email: BHS_IDOrders@duboischemicals.com & Copy: Gia.Frederick@duboischemicals.com Toll Free: (800) 999-8233 Fax: (801) 973-8838 Customer Service Direct Line: (801) 973-8232 Email: Gia.Frederick@duboischemicals.com Sales Contact: Jarrod Burch - VP, Sales- Process Chemicals & Energy Cell: (513) 446-3336 Jarrod.Burch@duboischemicals.com
---	--

**BAY AREA CHEMICAL CONSORTIUM
STANDARD AGREEMENT, PAGE 1 OF 2
BID NO. 08-2025
SUPPLY AND DELIVERY OF HYDROFLUOSILICIC ACID (FLUORIDE)**

I hereby agree to furnish HYDROFLUOSILICIC ACID (FLUORIDE) identified in the attached bid forms, as solicited by the Bay Area Chemical Consortium (BACC), to one or more of the participating BACC Agencies.

Company: DuBois Chemicals, Inc.
Address: 3630 East Kemper Road
City, State, ZIP: Sharonville, OH 45241
Phone: (208) 466-8437
Email: Bids@duboischemicals.com
Authorized Representative: Andrew Paulson - Municipal Bid Specialist
Signature: *Andrew Paulson*
Date: February 20, 2025

WE ACKNOWLEDGE RECEIVING ADDENDUM/ADDENDA NUMBER 0 THROUGH 0.

SPECIFIC DEVIATIONS:

☐

This box must be checked if bidder has any proposed specific deviations. Per Section 2.12 Proposed Deviations from the Specifications by the Bidder, the absence of a proposed change in the specifications will hold the bidder strictly accountable to the specifications as described in the bid document, including any addendum.

Describe the specific deviations below. A copy of the proposed specifications must be attached to this Standard Agreement at the time of submission, with bidder's name clearly shown on each document.

Description of Emergency Supply Plan: Provide a summary of vendor's plans to continue to supply product in the event of an unexpected disaster or urgent emergency event.

Main supply comes from Fremont, CA NSF Terminal and Backup supply from Vernon, CA (also NSF)
Backup main source and manufacturing site Rock Springs, WY. We also have contracted with backup suppliers in case of plant shut down.

Trucking is mostly by the given third-party hauler, but we have our own rubber-lined TT and we have used other companies in the past as well, like Thatcher Company.

STANDARD AGREEMENT, PAGE 2 OF 2

BIDDER INFORMATION

1. Legal Name of Bidder:
DuBois Chemicals, Inc.
2. Bidder's Street Address:
3630 East Kemper Road, Cincinnati, OH 45241
3. Mailing Address:
1717 E Fargo Ave, Nampa, ID 83687 - For Bids & Contracts
4. Business Telephone: (208) 466-8437 Fax Number: (208) 466-8989
5. Type of Supplier:
☐ Sole Proprietor ☐ Partnership ☒ Corporation ☐ LLC
If Corporation, indicate State where incorporated: Delaware
6. Business License Number issued by the City where the Supplier's principal place of business is located.
Number: 3162246 Issuing City: State of California
1808105 State of Ohio
7. Supplier Federal Tax Identification Number: 80-0244824
8. Emergency Contact: Name: PROSAR then contact Erik Diehl
Phone Number: 866-923-4919 Dir. Manufacturing W. Region
651-724-3308
9. Order Contact: Name: Veronica Childers
Address: 1717 E Fargo Ave, Nampa, ID 83687
Phone Number: (208) 466-8437 Fax Number: (208) 466-8989
Email: FSA@duboischemicals.com
10. References:

<u>Company/Agency Name</u>	<u>Contact Name</u>	<u>Phone Number</u>
<u>1) Escondido, CA</u>	<u>Natisha Tuua</u>	<u>760-839-5466</u>
<u>2) MWD Southern CA</u>	<u>Angelo Sarao</u>	<u>213-217-7610</u>
<u>3) East Bay MUD, CA</u>	<u>John Grimes</u>	<u>510-287-0316</u>
11. Chemical Manufacturer's name and address (if different from Bidder):
Domestic: JR Simplot, Rock Springs, WY

**Non-Collusion Affidavit
To Be Executed By Bidder and Submitted With Bid**

State of ~~California~~ Washington)
) ss.
County of King)

Andrew Paulson, being first duly sworn, deposes and says that he or she is the
(Bidder's Authorized Representative)

Municipal Bid Specialist of DuBois Chemicals, Inc. the party making the
(Title of Representative) (Legal Name of Bidder)

foregoing bid that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bid, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

I declare under penalty of perjury under the laws of the state of California that the foregoing is true and correct.

Andrew Paulson

Signature of: President, Secretary,
Manager, Owner, or Representative

Subscribed and sworn to before me this, 20th day of February, 20 25

Tamara Myers
Signature of Notary Public In and For

The County of King

State of Washington

All Signatures Must Be Witnessed By Notary



**BAY AREA CHEMICAL CONSORTIUM
BID FORM FOR BID NO. 08-2025
FOR SUPPLY AND DELIVERY OF HYDROFLUOSILICIC ACID (FLUORIDE)**

Sealed bids must be submitted in a PDF format and bidders must enter bid prices into the electronic bid platform (Line Item page)
<https://bacwa.org/about-bacc/>

No later than 4:00 PM. PT
Thursday, February 20, 2025

Legal Name of Bidder:

DuBois Chemicals, Inc.

Business Address

3630 East Kemper Road

Sharonville, OH 45241

Telephone Number: (208) 466-8437

Facsimile Number: (208) 466-8989

Email Address: Bids@duboischemicals.com

Authorized Representative (Please Print):

Andrew Paulson

Signature: Andrew Paulson

Date: February 20, 2025

I. All costs except California State sales tax for the purchase of HYDROFLUOSILICIC ACID (FLUORIDE) must be included in the amount shown entered into the electronic bid platform (Line Item page), including any and all mill assessments, fees, excise taxes, transportation charges, etc. Any exceptions to the bid must be noted under Specific Deviations on the Standard Agreement. Bidders shall submit bids per unit of measure as specified in the electronic bid platform (Line Item page).

II. Bidders must submit all of the following, attached to this Bid Form:

- a. All requirements listed in Section 2.21 Manufacturer's Info.
- b. If applicable, the name, address, and contact information for the third party hauling company as well as an affidavit signed by the Bidder that the third party hauler can and will deliver the chemical to each and every participating BACC Agency.

III. Bidder Obligations

By signing this Bid Form and entering into individual purchase orders, purchase agreements and/or contracts with BACC agencies, the bidder expressly agrees to be bound by all the provisions of the bid solicitation, including Sections I-IV.



The Public Health and Safety Organization

NSF Product and Service Listings

These NSF Official Listings are current as of **Thursday, February 20, 2025** at 12:15 a.m. Eastern Time. Please [contact NSF](#) to confirm the status of any Listing, report errors, or make suggestions.

Alert: NSF is concerned about fraudulent downloading and manipulation of website text. Always confirm this information by clicking on the below link for the most accurate information:

<http://info.nsf.org/Certified/PwsChemicals/Listings.asp?>

[CompanyName=DuBois&ChemicalName=Hydrofluosilicic+Acid&](#)

NSF/ANSI/CAN 60 Drinking Water Treatment Chemicals - Health Effects

DuBois Chemicals, Inc.

3630 East Kemper Road

Sharonville, OH 45241

United States

800-438-2647

[Visit this company's website](#)

(<http://www.duboischemicals.com>)

Facility : Fremont, CA

Fluorosilicic Acid

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Fluorosilicic Acid	Fluoridation	5mg/L

Facility : Vernon, CA

Fluorosilicic Acid

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Fluorosilicic Acid	Fluoridation	5mg/L

Facility : Mulberry, FL

Fluorosilicic Acid		
Trade Designation	Product Function	Max Use
FSA	Fluoridation	5mg/L

Facility : Nampa, ID

Fluorosilicic Acid		
Trade Designation	Product Function	Max Use
Fluorosilicic Acid	Fluoridation	5mg/L

Facility : Granite City, IL

Fluorosilicic Acid		
Trade Designation	Product Function	Max Use
Fluorosilicic Acid 5	Coagulation & Flocculation	5mg/L

Facility : Distribution Center - Seattle, WA

Fluosilicic Acid		
Trade Designation	Product Function	Max Use
Fluosilicic Acid	Fluoridation	6mg/L
Hydrofluosilicic Acid	Fluoridation	6mg/L

Number of matching Manufacturers is 1
Number of matching Products is 7
Processing time was 0 seconds



Subject: Product Guarantee Letter from Supplier - Fluoride

To Whom It May Concern,

Regarding submitting a letter guaranteeing the supply of HFS for the contract duration, DuBois Chemicals, Inc. would like to submit the following.

Even though DuBois Chemicals is Simplot's Authorized Distributor as listed in the following letter, we are unable to submit a "Manufacturer's Commitment Letter" from J.R. Simplot due to their advising counsel.

However, with or without a commitment letter, DuBois Chemicals treats all our HFS contracts in the same manner and does our best to meet the requirements of each of our customers.

DuBois Chemicals appreciates your business and looks forward to continuing to supply your chemical requirements. Please contact me if you need further clarification regarding this letter.

Sincerely,

A handwritten signature in cursive script, appearing to read "Laura Lanthier", with a long, sweeping underline.

Laura Lanthier

Manager, Municipal Bids & Contracts

Email: laura.lanthier@duboischemicals.com

Office: (208) 932-6615



Subject: Product Information - Fluoride

To Whom It May Concern,

The Fluorosilicic Acid is manufactured by J.R. Simplot Company, located in Rock Springs, WY. The product then will be shipped via dedicated rubber-lined tanker truck to the District's delivery locations.

The manufacturing process is in accordance with AWWA Standard Specifications and is ANSI/NSF 60 Standard Certified. During the production of phosphoric acid fluoride gases are produced that are recovered as fluorosilicic acid (FSA or H_2SiF_6).

Fluorosilicic Acid is used to treat potable water to reduce the incidence of dental caries. Please see attached Certificate of Analysis and Product Data sheets as well as NSF Certifications.

DuBois Chemicals appreciates your business and looks forward to continuing to supply your chemical requirements. Please contact me if you need further clarification regarding this letter.

Sincerely,

A handwritten signature in black ink that reads "Laura Lanthier". The signature is fluid and cursive, with a long, sweeping underline.

Laura Lanthier

Manager, Municipal Bids & Contracts

Email: laura.lanthier@duboischemicals.com

Office: (208) 932-6615



January 5, 2024

Certificate of Authorization

This is to certify that DuBois Chemical is the exclusive distributor authorized by the J. R. Simplot Company to sell Fluorosilicic Acid (FSA). This further will certify that the FSA manufactured by the J. R. Simplot Company is produced in accordance with AWWA standard B703a-19 and ANSI/NSF 60 standard specifications.

Sincerely,
J. R. Simplot Company

A handwritten signature in black ink, appearing to read "Jon Davidson".

Jon Davidson
Director Industrial, Silica and Feed



The Public Health and Safety Organization

NSF Product and Service Listings

These NSF Official Listings are current as of **Thursday, February 20, 2025** at 12:15 a.m. Eastern Time. Please [contact NSF](#) to confirm the status of any Listing, report errors, or make suggestions.

Alert: NSF is concerned about fraudulent downloading and manipulation of website text. Always confirm this information by clicking on the below link for the most accurate information:

<http://info.nsf.org/Certified/PwsChemicals/Listings.asp?>

[CompanyName=Simplot&ChemicalName=Hydrofluosilicic+Acid&](http://info.nsf.org/Certified/PwsChemicals/Listings.asp?CompanyName=Simplot&ChemicalName=Hydrofluosilicic+Acid&)

NSF/ANSI/CAN 60 Drinking Water Treatment Chemicals - Health Effects

J. R. Simplot Company

999 Main Street, Suite 1300

Boise, ID 83702

United States

208-336-2110

[Visit this company's website \(http://www.simplot.com\)](http://www.simplot.com)

Facility : Rock Springs, WY

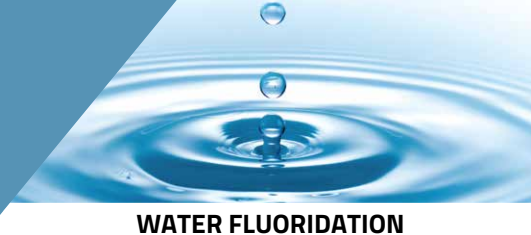
Fluosilicic Acid

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Fluorosilicic Acid	Fluoridation	5mg/L
Fluosilicic Acid	Fluoridation	5mg/L
Hydrofluosilicic Acid	Fluoridation	5mg/L

Number of matching Manufacturers is 1

Number of matching Products is 3

Processing time was 0 seconds



FLUOROSILICIC ACID (FSA)

HYDROFLUOROSILICIC ACID (HFS)

NSF⁽³⁾ & AWWA⁽⁴⁾ CERTIFIED

Chemical Properties	Specification Maximum ⁽¹⁾⁽²⁾	Typical ⁽¹⁾
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



ANSI/NSF/CAN
60 Maximum Use
Rate 5 mg/L

- (1) ppm unless otherwise specified
(2) Maximum unless otherwise noted
(3) Meets NSF/ANSI Standard 60
(4) Meets AWWA Standard B703-19

IMPORTANT: READ BEFORE USE. Read the entire Directions for Use, Conditions of Warranties and Limitations of Liability before using this product. If terms are not acceptable, return the unopened product container at once. By using this product, user or buyer accepts the following Conditions, Disclaimer of Warranties, and Limitations of Liability. **CONDITIONS, DISCLAIMER OF WARRANTIES, and LIMITATIONS OF LIABILITY.** **CONDITIONS:** The Directions For Use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risk associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of J.R. Simplot Company and its affiliates (collectively, "Simplot"). To the extent consistent with applicable law, all such risks shall be assumed by the user or buyer. **DISCLAIMER OF WARRANTIES:** To the extent consistent with applicable law, Simplot makes no other warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise, that extend beyond the statements made on this label. No agent of Simplot is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. To the extent consistent with applicable law, Simplot disclaims any liability whatsoever for special, incidental or consequential damages resulting from the use or handling of this product. **LIMITATIONS OF LIABILITY:** To the extent consistent with applicable law, the exclusive remedy of the user or buyer for any and all losses, injuries or damages resulting from the use or handling of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid or, at Simplot's election, the replacement of product.



DuBois Chemicals, Inc.
Quality Assurance
3630 East Kemper Road
Sharonville, Ohio U.S.A. 45241
Tel (513) 554-4229, Fax (513) 554-4387

CERTIFICATE OF ANALYSIS

PRODUCT: **Fluorosilicic Acid, 23%**
BATCH NUMBER: **GATX 32748**

DOM: **11/25/2024**
DOE: **11/25/2025**

This is to certify that the above product at the time of manufacture and shipment met our specification for the following:

<u>CHARACTERISTIC</u>	<u>SPECIFICATION</u>	<u>RESULT</u>
% Assay (H ₂ SiF ₆)	23 – 25%	24.30
% HF	1.0% Max	0.61
%P ₂ O ₅	Record	0
SPECIFIC GRAVITY (60F)	Record	1.222
Lead (Pb) ppm	Record	0.27
Arsenic ppm	Record	9.26
Color (APHA)	200 Max	5
Visible Suspended Matter	Record	None

Michelle Johnson 02/19/2025
Quality Assurance Dept.
DuBois Chemicals
**Select Sites manufactured under
ISO 9001**

QA Verification
Signed & Dated
This document is valid
without a signature

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.

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/m³)	2.5 mg/m³

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)

Safety Data Sheet

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 : 1 L
(49 CFR 173.27)

DOT Quantity Limitations Cargo aircraft only (49 : 30 L
CFR 175.75)

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.

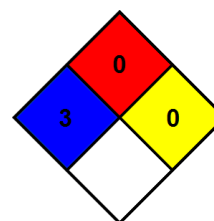
Full text of H-statements:

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.