

**AGREEMENT FOR HYDROFLUOSILICIC ACID SUPPLY AND DELIVERY –  
WATER TREATMENT PLANT #1**

THIS AGREEMENT FOR HYDROFLUOSILICIC ACID SUPPLY AND DELIVERY – WATER TREATMENT PLANT #1 ("Agreement") is entered into by and between the **CITY OF OCALA**, a Florida municipal corporation ("City"), and **UNIVAR SOLUTIONS USA, INC.**, a foreign for-profit corporation duly organized in the state of Washington and authorized to do business in the State of Florida (EIN: 91-1347935) ("Vendor").

**R E C I T A L S :**

**WHEREAS**, on January 9, 2020, the City of Ocala issued an Invitation to Bid for the provision hydrofluosilicic acid ( $H_2SiF_6$ ) for the potable water treatment systems at the City of Ocala's Water Treatment Plant #1, located at 1808 NE 36<sup>th</sup> Avenue, Ocala, Florida 34470, ITB No.: WSD/200001 (the "Solicitation"); and

**WHEREAS**, two (2) firms responded to the Solicitation and, after consideration of the firms' price and other evaluation factors set forth in the Solicitation, Univar Solutions USA, Inc. was selected to provide hydrofluosilicic acid for the potable water treatment systems located at City of Ocala's Water Treatment Plant #1 (the "Project"); and

**WHEREAS**, Vendor certifies that it has manufactured hydrofluosilicic acid for potable water applications for a minimum of three (3) years and has competent and trained personnel familiar with the conventional lime softening treatment process; and

**NOW THEREFORE**, in consideration of the foregoing recitals, the following mutual covenants and conditions, and other good and valuable consideration, City and Vendor agree as follows:

**T E R M S   O F   A G R E E M E N T :**

1. **RECITALS.** City and Vendor hereby represent, warrant, and agree that the Recitals set forth above are true and correct and are incorporated herein by reference.
2. **CONTRACT DOCUMENTS.** The Contract Documents which comprise the entire understanding between City and Vendor shall only include: (a) this Agreement; (b) those documents listed in this section as Exhibits to this Agreement; (c) the City's Solicitation for the Project and the bid submitted by Vendor in response to same (the "Solicitation Documents"); and (d) those documents identified in the Project Specification section of this Agreement (if any). Each of these documents are incorporated herein by reference for all purposes.

If there is a conflict between the terms of this Agreement and the Contract Documents, then the terms of this Agreement shall control, amend, and supersede any conflicting terms contained in the remaining Contract Documents.

A. **Exhibits to Agreement:** The Exhibits to this Agreement are as follows:

Exhibit A: Scope of Work (A-1 through A-3)

Exhibit B: Safety Data Sheets (B-1 through B-19)

If there is a conflict between the individual Exhibits regarding the scope of work to be performed, then any identified inconsistency shall be resolved by giving precedence in the following order: (1) Exhibit A, then (2) Exhibit B.

3. **SCOPE OF SERVICES.** Vendor shall provide all materials, labor, supervision, tools, accessories, equipment, permits, fees, testing, inspections, certifications, and all other things necessary for Vendor to perform its obligations under this Agreement as set forth in the attached **Exhibit A - Scope of Work** and the Solicitation Documents. The Scope of Work may only be adjusted by written amendment executed by both parties.

4. **COMPENSATION.** City shall pay Vendor a price not to exceed the maximum limiting amount of **SEVENTY-TWO THOUSAND, SIX HUNDRED AND NO/100 DOLLARS (\$72,600)** (the "Contract Sum") as full and complete compensation for the timely and satisfactory completion of the work in compliance with the Contract Documents and the unit pricing set forth below.

A. **Unit Pricing.** The Contract Sum shall be effective throughout the Contract Term and is based upon the following estimates and assumptions:

Description	Estimate/Assumption
Price per gallon	\$2.42/gallon
Estimated Annual Usage	15,000 gallons/year
Estimated Annual Deliveries	6 deliveries/year
Minimum Delivery Amount	2000 gallons/delivery
Estimated Delivery Amount	2500-2700 gallons/delivery

B. **Order Placement.** City shall call in orders for the product and services no less than ten (10) days in advance of the required delivery date. Each order shall include the number of gallons desired. The product shall be delivered in increments of not less than 2000 gallons per delivery in accordance with to the requirements set forth in **Exhibit A – Scope of Work**.

C. **Shipment Testing and Product Rejection.** City shall retain the right to perform standard testing on each shipment of the product upon delivery and to reject any shipment which contains product that fails to meet the minimum performance criteria set forth in the



Contract Documents. Should any shipment of the product be found to be below the quantity, quality, or performance standards set forth in the Contract Documents, Vendor shall remove the rejected product at its sole expense and provide satisfactory replacement product to the City within three (3) days of the date of rejection. If Vendor cannot provide replacement product to the City within the required timeframe, Vendor shall credit the City in full for the delivery price of the rejected material.

- D. **Invoice Submission.** All invoices submitted by Vendor shall include the City Contract Number, an assigned Invoice Number, and an Invoice Date. Vendor shall submit the original invoice through the responsible City Project Manager ("Project Manager") at: **City of Ocala Water Resources Department, Attn: Robyn Preston, 1805 NE 30<sup>th</sup> Avenue, Bldg. 600, Ocala, Florida 34470, E-mail: [rpreston@ocalafl.org](mailto:rpreston@ocalafl.org).**
- E. **Payment of Invoices by City.** The City Project Manager must review and approve all invoices prior to payment. City Project Manager's approval shall not be unreasonably withheld, conditioned, or delayed.
- F. **Withholding of Payment.** City reserves the right to withhold, in whole or in part, payment for any and all work that: (i) has not been completed by Vendor; (ii) is inadequate or defective and has not been remedied or resolved in a manner satisfactory to the City Project Manager; or (iii) which fails to comply with any term, condition, or other requirement under this Agreement. Any payment withheld shall be released and remitted to Vendor within **THIRTY (30)** calendar days of the Vendor's remedy or resolution of the inadequacy or defect.
- G. **Excess Funds.** If due to mistake or any other reason Vendor receives payment under this Agreement in excess of what is provided for by the Agreement, Vendor shall promptly notify City upon discovery of the receipt of the overpayment. Any overpayment shall be refunded to City within **THIRTY (30)** days of Vendor's receipt of the overpayment or must also include interest calculated from the date of the overpayment at the interest rate for judgment at the highest rate allowed by law.
- H. **Tax Exemption.** City is exempt from all federal excise and state sales taxes (State of Florida Consumer's Certification of Exemption 85-8012621655C-9). The City's Employer Identification Number is 59-60000392. Vendor shall not be exempted from paying sales tax to its suppliers for materials to fulfill contractual obligations with the City, nor will Vendor be authorized to use City's Tax Exemption Number for securing materials listed herein.

- 5. **EFFECTIVE DATE AND TERM.** This Agreement shall become effective and commence on **MARCH 1, 2020** and continue for a term of **TWO (2)** years, through and including **FEBRUARY 28, 2022**. This Agreement may be renewed for up to **TWO (2)** additional, **ONE-YEAR** (1-year) periods by written consent between City and Vendor.

4. **FORCE MAJEURE.** Neither party shall be liable for delay, damage, or failure in the performance of any obligation under this Agreement if such delay, damage, or failure is due to causes beyond its reasonable control, including without limitation: fire, flood, strikes and labor disputes, acts of war, acts of nature, terrorism, civil unrest, acts or delays in acting of the government of the United States or the several states, judicial orders, decrees or restrictions, or any other like reason which is beyond the control of the respective party ("Force Majeure"). The party affected by any event of force majeure shall use reasonable efforts to remedy, remove, or mitigate such event and the effects thereof with all reasonable dispatch.

The party affected by force majeure shall provide the other party with full particulars thereof including, but not limited to, the nature, details, and expected duration thereof, as soon as it becomes aware.

When force majeure circumstances arise, the parties shall negotiate in good faith any modifications of the terms of this Agreement that may be necessary or appropriate in order to arrive at an equitable solution. Vendor performance shall be extended for a number of days equal to the duration of the force majeure. Vendor shall be entitled to an extension of time only and, in no event, shall Vendor be entitled to any increased costs, additional compensation, or damages of any type resulting from such force majeure delays.

6. **INSPECTION AND ACCEPTANCE OF THE WORK.** Vendor shall report its progress to the City Project Manager as set forth herein. All services, work, and materials provided by Vendor under this Agreement shall be provided to the satisfaction and approval of the Project Manager.
- A. The Project Manager shall decide all questions regarding the quality, acceptability, and/or fitness of materials furnished, or workmanship performed, the rate of progress of the work, the interpretation of the plans and specifications, and the acceptable fulfillment of the Agreement, in his or her sole discretion, based upon both the requirements set forth by City and the information provided by Vendor in its Proposal. The authority vested in the Project Manager pursuant to this paragraph shall be confined to the direction or specification of what is to be performed under this Agreement and shall not extend to the actual execution of the work.
- B. Neither the Project Manager's review of Vendor's work nor recommendations made by Project Manager pursuant to this Agreement will impose on Project Manager any responsibility to supervise, direct, or control Vendor's work in progress or for the means, methods, techniques, sequences, or procedures of construction or safety precautions or programs incident Vendor's furnishing and performing the work.



7. **TERMINATION AND DEFAULT.** Either party, upon determination that the other party has failed or refused to perform or is otherwise in breach of any obligation or provision under this Agreement or the Contract Documents, may give written notice of default to the defaulting party in the manner specified for the giving of notices herein. Termination of this Agreement by either party for any reason shall have no effect upon the rights or duties accruing to the parties prior to termination.

A. **Termination by City for Cause.** City shall have the right to terminate this Agreement immediately, in whole or in part, upon the failure of Vendor to carry out any obligation, term, or condition of this Agreement. City's election to terminate the Agreement for default shall be communicated by providing Vendor written notice of termination in the manner specified for the giving of notices herein. Any notice of termination given to Vendor by City shall be effective immediately, unless otherwise provided therein, upon the occurrence of any one or more of the following events:

- (1) Vendor fails to timely and properly perform any of the services set forth in the Agreement;
- (2) Vendor provides product that does not meet the specifications of the Agreement, including but not limited to:
  - a. product furnished by Vendor which does not perform to the specifications set forth in the attached Exhibit A – Scope of Work;
  - b. product furnished by Vendor is found to be substantially different in formula or solution make up from that which was previously supplied by Vendor and found to be acceptable by City;
  - c. product furnished by Vendor is found to contain impurities which damage City of Ocala Water and Wastewater facilities;
- (3) Product furnished by Vendor is otherwise found to be unsatisfactory and is not replaced within three days of the date of notification of said unsatisfactory condition;
- (4) Vendor fails to complete the work required within the time stipulated in the Agreement;  
or
- (5) Vendor fails to make progress in the performance of the Agreement and/or gives City reason to believe that Vendor cannot or will not perform to the requirements of the Agreement.

- B. **Vendor's Opportunity to Cure Default.** City may, in its sole discretion, provide Vendor with an opportunity to cure the violations set forth in City's notice of default to Vendor. Vendor shall commence to cure the violations immediately and shall diligently and continuously prosecute such cure to completion within a reasonable time as determined by City. If the violations are not corrected within the time determined to be reasonable by City or to the reasonable satisfaction of City, City may, without further notice, declare Vendor to be in breach of this Agreement and pursue all remedies available at law or equity, to include termination of this Agreement without further notice.
- (1) In the event that Vendor default is the result of the provision of product which does not perform to the specifications set forth in the Contract Documents, City may, in its sole discretion, provide Vendor with notice of these violations within twenty-four (24) hours of discovery and Vendor shall cure said violation within three (3) days of the date of notification.
- C. **City's Remedies Upon Vendor Default.** In the event that Vendor fails to cure any default under this Agreement within the time period specified in this section, City may pursue any remedies available at law or equity, including, without limitation, the following:
- (1) City shall be entitled to terminate this Agreement without further notice;
- (2) City shall be entitled to hire another Vendor to complete the required work in accordance with the needs of City;
- (3) City shall be entitled to recover from Vendor all damages, costs, and attorney's fees arising from Vendor's default prior to termination, to include the cost of any repair, maintenance, or replacement to City water and wastewater facilities; and
- (4) City shall be entitled to recovery from Vendor any actual excess costs by: (i) deduction from any unpaid balances owed to Vendor; or (ii) any other remedy as provided by law.
- D. **Termination for Non-Funding.** In the event that budgeted funds to finance this Agreement are reduced, terminated, or otherwise become unavailable, City may terminate this Agreement upon written notice to Vendor without penalty or expense to City. City shall be the final authority as to the availability of budgeted funds.
- E. **Termination for Convenience.** City reserves the right to terminate this Agreement in whole or in part at any time for the convenience of City without penalty or recourse. The Project Manager shall provide written notice of the termination. Upon receipt of the notice, Vendor shall immediately discontinue all work as directed in the notice, notify all subcontractors of the effective date of the termination, and minimize all further costs to City including, but not limited to, the placing of any and all orders for materials, facilities, or supplies, in



connection with its performance under this Agreement. Vendor shall be entitled to receive compensation solely for: (1) the actual cost of the work completed in conformity with this Agreement; and/or (2) such other costs incurred by Vendor as permitted under this Agreement and approved by City.

8. **PERFORMANCE EVALUATION.** At the end of the contract, City may evaluate Vendor's performance. Any such evaluation will become public record.
9. **NOTICE REGARDING FAILURE TO FULFILL AGREEMENT.** Any Vendor who enters into an Agreement with the City of Ocala and fails to complete the contract term, for any reason, shall be subject to future bidding suspension for a period of **ONE (1)** year and bid debarment for a period of up to **THREE (3)** years for serious contract failures.
10. **VENDOR REPRESENTATIONS.** Vendor expressly represents that:
  - A. Vendor has read and is fully familiar with all the terms and conditions of this Agreement, the Contract Documents, and other related data and acknowledges that they are sufficient in scope and detail to indicate and convey understanding of all terms and conditions of the work to be performed by Vendor under this Agreement.
  - B. Vendor has disclosed, in writing, all known conflicts, errors, inconsistencies, discrepancies, or omissions discovered by Vendor in the Contract Documents, and that the City's written resolution of same is acceptable to Vendor.
  - C. Vendor is familiar with all local, state, and Federal laws, regulations, and ordinances which may affect cost, progress, or its performance under this Agreement whatsoever.
  - D. **Public Entity Crimes.** Vendor understands that a "public entity crime" as defined in section 287.133(1)(g), Florida Statutes, is "a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or with the United States..." Vendor further understands that any person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime (1) may not submit a bid, proposal, or reply on a contract: (a) to provide any goods or services to a public entity; (b) for the construction or repair of a public building or public work; or (c) for leases of real property to a public entity; (2) may not be awarded or perform work as a Vendor, supplier, subcontractor, or consultant under a contract with any public entity; and (3) may not transact business with any public entity in excess of the threshold amount provided in section 287.017, Florida Statutes, for CATEGORY TWO for a period of 36 months from the date of being placed on the convicted vendor list.

11. **VENDOR RESPONSIBILITIES.** Except as otherwise specifically provided for in this Agreement, the following provisions are the responsibility of the Vendor:
- A. Vendor shall competently and efficiently supervise, inspect, and direct all work to be performed under this Agreement, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the work in accordance with the Contract Documents.
  - B. Vendor shall be solely responsible for the means, methods, techniques, sequences, procedures, and safety precautions or programs incident thereto.
  - C. Vendor shall be solely responsible for the offloading of the product from the delivery tanker to the City's existing hydrofluorosilic acid storage tank.
  - D. Vendor shall be responsible for neutralizing, hosing down or otherwise cleaning any product spills which may occur during delivery of materials and equipment under this Agreement as required by law.
  - E. Vendor shall be responsible to see that the finished work complies accurately with the contract and the intent thereof.
  - F. Vendor shall comply with all local, state, and Federal laws, regulations, and ordinances which may affect cost, progress, or its performance under this Agreement, and be responsible for all costs associated with same.
  - G. Vendor shall continue its performance under this Agreement during the pendency of any dispute or disagreement arising out of or relating to this Agreement, except as Vendor and City may otherwise agree in writing.
12. **NO EXCLUSIVITY.** It is expressly understood and agreed by the parties that this is not an exclusive agreement. Nothing in this Agreement shall be construed as creating any exclusive arrangement with Vendor or as prohibit City from either acquiring similar, equal, or like goods and/or services or from executing additional contracts with other entities or sources.
13. **COMMERCIAL AUTO LIABILITY INSURANCE.** Vendor shall procure and maintain, for the life of this Agreement, commercial auto liability insurance covering all automobiles owned, non-owned, hired, and scheduled by Vendor with a combined limit of not less than One Million Dollars (\$1,000,000) for bodily injury and property damage for each accident. Vendor shall name City as an additional insured under the insurance policy.



14. **GENERAL LIABILITY INSURANCE.** Vendor shall procure and maintain, for the life of this Agreement, commercial general liability insurance with minimum coverage limits not less than:
- A. One Million Dollars (\$1,000,000) per occurrence and Two Million Dollars (\$2,000,000) aggregate limit for bodily injury, property damage, and personal and advertising injury; and
  - B. One Million Dollars (\$1,000,000) per occurrence and Two Million Dollars (\$2,000,000) aggregate limit for products and completed operations.
  - C. Coverage for contractual liability is also required.
  - D. City, a political subdivision of the State of Florida, and its officials, employees, and volunteers shall be covered as an additional insured with a CG 20 26 04 13 Additional Insured – Designated Person or Organization Endorsement or similar endorsement providing equal or broader Additional Insured Coverage regarding liability arising out of activities performed by or on behalf of Vendor. The coverage shall contain no special limitation on the scope of protection afforded to City, its officials, employees, or volunteers.
- E. **POLLUTION LIABILITY INSURANCE.** If not otherwise included in Vendor's Commercial General Liability Insurance coverage, Vendor shall procure and maintain, for a period of **THREE (3)** years after final completion of the Work under this Agreement, pollution liability insurance coverage for bodily injury and property damage claims arising from the sudden or gradual discharge, dispersal, release, or escape of any irritant or contaminant into or upon land, any structure, the atmosphere, watercourse, or body of water, including groundwater, in an amount not less than One Million Dollars (\$1,000,000) per occurrence and Two Million Dollars (\$2,000,000) aggregate limit. This shall include coverage for claims of: (a) clean up, either on-site or off site; (b) third party liability, including bodily injury, property damage, natural resource damage, third party property loss of use/revenue, and clean up); and/or (c) costs incurred for the investigation, defense, or settlement of claims. Said insurance must provide coverage for up to three (3) years after the completion of the Services.
15. **WORKERS' COMPENSATION AND EMPLOYER'S LIABILITY.** Vendor shall procure and maintain, for the life of this Agreement, Workers' Compensation insurance and employer's liability insurance in amounts required by applicable statutes. Vendor shall ensure any and all subcontractors have coverage as required by applicable statutes. Vendor is not required to name City as an additional insured under the policies, but a subrogation waiver endorsement is required. Exceptions and exemptions may be allowed by City's HR/Risk Director, so long as they are in accordance with Florida Statute.

## 16. MISCELLANEOUS INSURANCE PROVISIONS.

- A. Insurance Requirements. These insurance requirements shall not relieve or limit the liability of Vendor. City does not in any way represent that these types or amounts of insurance are sufficient or adequate to protect Vendor's interests or liabilities, but are merely minimums. No insurance is provided by the City under this contract to cover Vendor. **No work shall be commenced under this contract until the required Certificate(s) of Insurance have been provided.** Work shall not continue after expiration (or cancellation) of the Certificates of Insurance and shall not resume until new Certificate(s) of Insurance have been provided. Insurance written on a "Claims Made" form is not acceptable without consultation with City of Ocala Risk Management.
- B. Deductibles. Vendor is responsible for the amount of any deductible or self-insured retention. Vendor's deductibles/self-insured retentions shall be disclosed to the City and may be disapproved by City.
- C. Certificates of Insurance. Vendor shall provide a Certificate of insurance, issued by an agency authorized to do business in the State of Florida and with an A.M. Best rating\* of at least an A, showing the "City of Ocala" as an Additional Insured. Shown on the certificate at the certificate holder should be: **City of Ocala, Contracting Department, Third Floor, 110 SE Watula Avenue, Ocala, FL 34471.** Renewal certificates must also be forwarded to the Contracting Department prior to the policy expiration. **TEN (10)** days written notice must be provided to the City in the event of cancellation.  
  
\*Non-rated insurers must be pre-approved by the City Risk Manager.
- D. Failure to Maintain Coverage. In the event Vendor fails to disclose each applicable deductible/self-insured retention or obtain or maintain in full force and effect any insurance coverage required to be obtained by Vendor under this Agreement, Vendor shall be considered to be in default of this Agreement.
- E. Severability of Interests. Vendor shall arrange for its liability insurance to include General Liability, Business Automobile Liability, and Excess/Umbrella Insurance, or to be endorsed to include a severability of interests/cross liability provision so that the "City of Ocala" (where named as an additional insured) will be treated as if a separate policy were in existence, but without increasing the policy limits.

17. **TRAFFIC CONTROL AND BARRICADES.** The Vendor shall mitigate impact on local traffic conditions to all extents possible. The Vendor is responsible for establishing and maintaining appropriate traffic control and barricades. The Vendor shall provide sufficient signing, flagging



and barricading to ensure the safety of vehicular and pedestrian traffic at all locations where work is being done under this Agreement.

- A. In addition to the requirements set forth in bid, the Vendor shall maintain at all times a good and sufficient fence, railing or barrier around all exposed portions of said work in such a manner as to warn vehicular and pedestrian traffic of hazardous conditions.
- B. Should Vendor fail to properly barricade his work or stored material sites in the manner outlined above, the City may have the necessary barricading done, and all cost incurred for said barricading shall be charged to the Vendor.

**18. SAFETY/ENVIRONMENTAL.** Vendor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Vendor shall make an effort to detect hazardous conditions and shall take prompt action where necessary to avoid accident, injury or property damage. EPA, DEP, OSHA and all other applicable safety laws and ordinances shall be followed as well as American National Standards Institute Safety Standards. Vendor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:

- A. All employees on the work and other persons that may be affected thereby;
- B. All work, materials and equipment to be incorporated therein, whether in storage on or off the site; and
- C. Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities.

All, injury, or loss to any property caused, directly or indirectly, in whole or in part, by Vendor, any subcontractor, or anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, shall be remedied by Vendor. Vendor's duties and responsibilities for the safety and protection of the work shall continue until such time as the work is completed and accepted by City.

**19. NON-DISCRIMINATORY EMPLOYMENT PRACTICES.** During the performance of the contract, the Vendor shall not discriminate against any employee or applicant for employment because of race, color, religion, ancestry, national origin, sex, pregnancy, age, disability, sexual orientation, gender identity, marital or domestic partner status, familial status, or veteran status and shall take affirmative action to ensure that an employee or applicant is afforded equal employment opportunities without discrimination. Such action shall be taken with reference to, but not limited to: recruitment, employment, termination, rates of pay or other forms of compensation and selection for training or retraining, including apprenticeship and on-the-job training.

20. **SUBCONTRACTORS.** Nothing in this Agreement shall be construed to create, impose, or give rise to any duty owed by City or its representatives to any subcontractor of Vendor or any other persons or organizations having a direct contract with Vendor, nor shall it create any obligation on the part of City or its representatives to pay or seek payment of any monies to any subcontractor of Vendor or any other persons or organizations having a direct contract with Vendor, except as may otherwise be required by law. City shall not be responsible for the acts or omissions of any vendor, subcontractor, or of any of their agents or employees. nor shall it create any obligation on the part of City or its representatives to pay or to seek the payment of any monies to any subcontractor or other person or organization, except as may otherwise be required by law.
21. **EMERGENCIES.** In an emergency affecting the welfare and safety of life or property, Vendor, without special instruction or authorization from the City Project Manager, is hereby permitted, authorized and directed to act at its own discretion to prevent threatened loss or injury. Vendor shall be required to provide to the City Project Manager with the names, addresses and telephone numbers of those representatives who can be contacted at any time in case of emergency. Vendor's emergency representatives must be fully authorized and equipped to correct unsafe or excessively inconvenient conditions on short notice by City or public inspectors.
22. **INDEPENDENT CONTRACTOR STATUS.** Vendor acknowledges and agrees that under this Agreement, Vendor and any agent or employee of Vendor shall be deemed at all times to be an independent contractor and shall be wholly responsible for the manner in which it performs the services and work required under this Agreement. Neither vendor nor its agents or employees shall represent or hold themselves out to be employees of City at any time. Neither Vendor nor its agents or employees shall have employee status with City. Nothing in this Agreement shall constitute or be construed to create any intent on the part of either party to create an agency relationship, partnership, employer-employee relationship, joint venture relationship, or any other relationship which would allow City to exercise control or discretion over the manner or methods employed by Vendor in its performance of its obligations under this Agreement.
23. **ACCESS TO FACILITIES.** City shall provide Vendor with access to all City facilities as is reasonably necessary for Vendor to perform its obligations under this Agreement.
24. **ASSIGNMENT.** Neither party may assign its rights or obligations under this Agreement to any third party without the prior express approval of the other party, which shall not be unreasonably withheld.



25. **RIGHT OF CITY TO TAKE OVER CONTRACT.** Should the work to be performed by Vendor under this Agreement be abandoned, or should Vendor become insolvent, or if Vendor shall assign or sublet the work to be performed hereunder without the written consent of City, the City Project Manager shall have the power and right to hire and acquire additional men and equipment, supply additional material, and perform such work as deemed necessary for the completion of this Agreement. Under these circumstances, all expenses and costs actually incurred by City to accomplish such completion shall be credited to City along with amounts attributable to any other elements of damage and certified by the Project Manager. The Project Manager's certification as to the amount of such liability shall be final and conclusive.
26. **PUBLIC RECORDS.** Vendor shall comply with all applicable provisions of the Florida Public Records Act, Chapter 119, Florida Statutes. Specifically, Vendor shall:
- A. Keep and maintain public records required by the public agency to perform the service.
  - B. Upon request from the public agency's custodian of public records, provide the public agency 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, or as otherwise provided by law.
  - C. 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 Vendor does not transfer the records to the public agency.
  - D. Upon completion of the contract, transfer, at no cost, to the public agency all public records in possession of Vendor or keep and maintain public records required by the public agency to perform the service. If Vendor transfers all public records to the public agency upon completion of the contract, Vendor shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If Vendor keeps and maintains public records upon completion of the contract, Vendor shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the public agency, upon request from the public agency's custodian of public records, in a format that is compatible with the information technology systems of the public agency.

**IF VENDOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO VENDOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE**

**CUSTODIAN OF PUBLIC RECORDS AT: CITY OF OCALA, OFFICE OF THE CITY CLERK; 352-629-8266; E-mail: [clerk@ocalafl.org](mailto:clerk@ocalafl.org); City Hall, 110 SE Watula Avenue, Ocala, FL 34471.**

27. **AUDIT.** Vendor shall comply and cooperate immediately with any inspections, reviews, investigations, or audits relating to this Agreement as deemed necessary by the Florida Office of the Inspector General, the City's Internal or External auditors or by any other Florida official with proper authority.
28. **PUBLICITY.** Vendor shall not use City's name, logo, seal or other likeness in any press release, marketing materials, or other public announcement without City's prior written approval.
29. **E-VERIFY.** In accordance with Executive Order 11-116, Vendor shall utilize the U.S. Agency of Homeland Security's E-Verify system, <https://e-verify.uscis.gov/emp>, to verify the employment eligibility of all employees hired during the term of this Agreement. Vendor shall also require all subcontractors performing work under this Agreement to utilize the E-Verify system for any employees they may hire during the term of this Agreement.
30. **CONFLICT OF INTEREST.** Vendor must have disclosed with the submission of their bid, the name of any officer, director, or agent who may be employed by City. Vendor must disclose the name of any City employee who owns, directly or indirectly, any interest in Vendor or any affiliated business entity. Any additional conflicts of interest that may occur during the contract term must be disclosed to the City of Ocala Procurement Department.
31. **WAIVER.** The failure or delay of any party at any time to require performance by another party of any provision of this Agreement, even if known, shall not affect the right of such party to require performance of that provision or to exercise any right, power or remedy hereunder. Any waiver by any party of any breach of any provision of this Agreement should not be construed as a waiver of any continuing or succeeding breach of such provision, a waiver of the provision itself, or a waiver of any right, power or remedy under this Agreement. No notice to or demand on any party in any circumstance shall, of itself, entitle such party to any other or further notice or demand in similar or other circumstances.
32. **SEVERABILITY OF ILLEGAL PROVISIONS.** Wherever possible, each provision of this Agreement shall be interpreted in such a manner as to be effective and valid under the applicable law. Should any portion of this Agreement be declared invalid for any reason, such declaration shall have no effect upon the remaining portions of this Agreement.



33. **INDEMNITY.** Vendor shall indemnify and hold harmless City and its elected officials, employees and volunteers against and from all damages, claims, losses, costs, and expenses, including reasonable attorneys' fees, which City or its elected officials, employees or volunteers may sustain, or which may be asserted against City or its elected officials, employees or volunteers, arising out of the activities contemplated by this Agreement including, without limitation, harm or personal injury to third persons during the term of this Agreement to the extent attributable to the actions of Vendor, its agents, and employees.
34. **NO WAIVER OF SOVEREIGN IMMUNITY.** Nothing herein is intended to waive sovereign immunity by the City to which sovereign immunity may be applicable, or of any rights or limits of liability existing under Florida Statute § 768.28. This term shall survive the termination of all performance or obligations under this Agreement and shall be fully binding until any proceeding brought under this Agreement is barred by any applicable statute of limitations.
35. **NOTICES.** All notices, certifications or communications required by this Agreement shall be given in writing and shall be deemed delivered when personally served, or when received if by facsimile transmission with a confirming copy mailed by registered or certified mail, postage prepaid, return receipt requested. Notices can be concurrently delivered by e-mail. All notices shall be addressed to the respective parties as follows:

If to Vendor:

Univar Solutions USA, Inc.  
Attn: Muni Team  
6049 Old Highway 41  
Tampa, Florida 33980  
Phone: (253) 872-5000 Fax: (253) 872-5041  
E-mail: [muniteam-west@univarsolutions.com](mailto:muniteam-west@univarsolutions.com)

If to City of Ocala:

Tiffany Kimball, Contracting Officer  
110 SE Watula Avenue, 3rd Floor  
Ocala, Florida 34471  
Phone: 352-629-8366 Fax: 352-690-2025  
E-mail: [tkimball@ocalafl.org](mailto:tkimball@ocalafl.org)

Copy to:

Patrick G. Gilligan, Esquire  
Gilligan, Gooding, Franjola & Batsel, P.A.  
1531 SE 36<sup>th</sup> Avenue  
Ocala, Florida 34471  
Phone: 352-867-7707 Fax: 352-867-0237  
E-mail: [pgilligan@ocalalaw.com](mailto:pgilligan@ocalalaw.com)

36. **ATTORNEYS' FEES.** If any civil action, arbitration or other legal proceeding is brought for the enforcement of this Agreement, or because of an alleged dispute, breach, default or misrepresentation in connection with any provision of this Agreement, the successful or prevailing party shall be entitled to recover reasonable attorneys' fees, sales and use taxes, court costs and all expenses reasonably incurred even if not taxable as court costs (including, without limitation, all such fees, taxes, costs and expenses incident to arbitration, appellate, bankruptcy and post-judgment proceedings), incurred in that civil action, arbitration or legal proceeding, in addition to any other relief to which such party or parties may be entitled. Attorneys' fees shall include, without limitation, paralegal fees, investigative fees, administrative costs, sales and use taxes and all other charges reasonably billed by the attorney to the prevailing party.
37. **JURY WAIVER.** IN ANY CIVIL ACTION, COUNTERCLAIM, OR PROCEEDING, WHETHER AT LAW OR IN EQUITY, WHICH ARISES OUT OF, CONCERNS, OR RELATES TO THIS AGREEMENT, ANY AND ALL TRANSACTIONS CONTEMPLATED HEREUNDER, THE PERFORMANCE HEREOF, OR THE RELATIONSHIP CREATED HEREBY, WHETHER SOUNDING IN CONTRACT, TORT, STRICT LIABILITY, OR OTHERWISE, TRIAL SHALL BE TO A COURT OF COMPETENT JURISDICTION AND NOT TO A JURY. EACH PARTY HEREBY IRREVOCABLY WAIVES ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY. NEITHER PARTY HAS MADE OR RELIED UPON ANY ORAL REPRESENTATIONS TO OR BY ANY OTHER PARTY REGARDING THE ENFORCEABILITY OF THIS PROVISION. EACH PARTY HAS READ AND UNDERSTANDS THE EFFECT OF THIS JURY WAIVER PROVISION.
38. **GOVERNING LAW.** This Agreement is and shall be deemed to be a contract entered and made pursuant to the laws of the State of Florida and shall in all respects be governed, construed, applied and enforced in accordance with the laws of the State of Florida.
39. **JURISDICTION AND VENUE.** The parties acknowledge that a majority of the negotiations, anticipated performance and execution of this Agreement occurred or shall occur in Marion County, Florida. Any civil action or legal proceeding arising out of or relating to this Agreement shall be brought only in the courts of record of the State of Florida in Marion County or the United States District Court, Middle District of Florida, Ocala Division. Each party consents to the exclusive jurisdiction of such court in any such civil action or legal proceeding and waives any objection to the laying of venue of any such civil action or legal proceeding in such court and/or the right to bring an action or proceeding in any other court. Service of any court paper may



be effected on such party by mail, as provided in this Agreement, or in such other manner as may be provided under applicable laws, rules of procedures or local rules.

40. **REFERENCE TO PARTIES.** Each reference herein to the parties shall be deemed to include their successors, assigns, heirs, administrators, and legal representatives, all whom shall be bound by the provisions hereof.
41. **MUTUALITY OF NEGOTIATION.** Vendor and City acknowledge that this Agreement is a result of negotiations between Vendor and City, and the Agreement shall not be construed in favor of, or against, either party because of that party having been more involved in the drafting of the Agreement.
42. **SECTION HEADINGS.** The section headings herein are included for convenience only and shall not be deemed to be a part of this Agreement.
43. **RIGHTS OF THIRD PARTIES.** Nothing in this Agreement, whether express or implied, is intended to confer any rights or remedies under or because of this Agreement on any persons other than the parties hereto and their respective legal representatives, successors and permitted assigns. Nothing in this Agreement is intended to relieve or discharge the obligation or liability of any third persons to any party to this Agreement, nor shall any provision give any third persons any right of subrogation or action over or against any party to this Agreement.
44. **AMENDMENT.** No amendment to this Agreement shall be effective except those agreed to in writing and signed by both parties to this Agreement.
45. **COUNTERPARTS.** This Agreement may be executed in counterparts, each of which shall be an original and all of which shall constitute the same instrument.
46. **ELECTRONIC SIGNATURE(S).** Vendor, if and by offering an electronic signature in any form whatsoever, will accept and agree to be bound by said electronic signature to all terms and conditions of this Agreement. Further, a duplicate or copy of the Agreement that contains a duplicated or non-original signature will be treated the same as an original, signed copy of this original Agreement for all purposes.
47. **ENTIRE AGREEMENT.** This Agreement, including exhibits, (if any) constitutes the entire Agreement between the parties hereto with respect to the subject matter hereof. There are no other representations, warranties, promises, agreements or understandings, oral, written or implied, among the Parties, except to the extent reference is made thereto in this Agreement. No course of prior dealings between the parties and no usage of trade shall be relevant or admissible to supplement, explain, or vary any of the terms of this Agreement. No representations, understandings, or agreements have been made or relied upon in the making of this Agreement other than those specifically set forth herein.

48. **LEGAL AUTHORITY.** Each person signing this Agreement on behalf of either party individually warrants that he or she has full legal power to execute this Agreement on behalf of the party for whom he or she is signing, and to bind and obligate such party with respect to all provisions contained in this Agreement.

IN WITNESS WHEREOF, the parties have executed this Agreement on the 18 day of March, 2020.

ATTEST:

CITY OF OCALA

Roseann J. Fusco

~~Angel B. Jacobs~~

~~City Clerk~~

Roseann J. Fusco  
Deputy City Clerk

Jay A. Musleh

Jay A. Musleh

City Council President

Approved as to form and legality:

UNIVAR SOLUTIONS USA, INC.

Robert W. Batsel, Jr.

Robert W. Batsel, Jr.

Assistant City Attorney

Shawna McCarthy

By: Shawna McCarthy  
(Printed Name)

Title: Municipal Commercial Manager  
(Vice President or higher)



ACCEPTED BY CITY COUNCIL  
March 17, 2020  
DATE  
OFFICE OF THE CITY CLERK



1.25.21

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Vendor shall supply and deliver hydrofluosilicic acid for the potable water treatment systems at the City of Ocala's Water Treatment Plant #1, located at 1808 NE 36<sup>th</sup> Avenue, Ocala, Florida 34470.

Only chemicals that meet the American Water Works Association (AWWA) standard B703-00 and which are manufactured specifically for use in a potable water treatment facility shall be used.

All deliveries shall be coordinated with City Project Manager, Robyn Preston, Telephone: 352-629-8471, E-mail: [rpreston@ocalafl.org](mailto:rpreston@ocalafl.org).

## PRODUCT SPECIFICATIONS

### General Specifications

The City will accept a 23% solution of hydrofluosilicic acid only.

### Drinking Water

The hydrofluosilicic acid shall meet all state and federal requirements for use in potable drinking water.

## PROCESS DESCRIPTION

The City of Ocala's Water Treatment Plant #1 utilizes approximately 15,000 gallons of hydrofluosilicic acid annually. The City stores its hydrofluosilicic acid in a large above-ground tank with containment.

## REQUIRED PRODUCT PACKAGING

The hydrofluosilicic acid must be delivered as one unit. Vendor is expressly prohibited from delivering hydrofluosilicic acid in individual totes. Any deliveries not meeting this requirement will be refused and not paid for by City.

## DELIVERY

### Delivery Locations and Required Delivery Response Time

Vendor shall deliver hydrofluosilicic acid to the City of Ocala Water Treatment Plant #1 (WTP1) located at 1808 NE 36<sup>th</sup> Avenue, Ocala, Florida 34470 within ten (10) calendar days after notification, except as otherwise permitted. If, for any reason, the hydrofluosilicic acid cannot be delivered within the



allotted time, the City reserves the right to purchase the needed hydrofluosilicic acid from another source.

#### Delivery Hours

Unless otherwise arranged by the City of Ocala Water and Wastewater Facilities personnel, delivery of hydrofluosilicic acid via truck shall be scheduled to occur at the plant between 8:00 a.m. and 3:30 p.m., Monday through Friday.

#### Delivery Truck and Removal of Containers

All Vendor delivery tankers must include hoses and fittings that are capable of connecting to the City's existing hydrofluosilicic acid storage tank.

#### Hydrofluosilicic Acid Spills

Vendor is responsible to neutralize with lime slurry, hose down, and otherwise clean any chemical spills as required by law, which may occur while delivering the hydrofluosilicic acid and shall immediately report all spills to Water Treatment Plant personnel.

### **TESTING OF HYDROFLUOSILICIC ACIDS**

City reserves the right to test each shipment. Each shipment must perform satisfactorily as determined by standard testing before it is accepted, and must also perform to the minimum performance criteria in these specifications. If any shipment of hydrofluosilicic acid is provided below the quantity, quality and performance criteria required by these specifications, City reserves the right to reject the shipment. The rejected material shall be removed by Vendor at Vendor's expense. Vendor shall then replace the rejected material with satisfactory material or credit the City for the full delivered price of the rejected material.

### **TECHNICAL ASSISTANCE**

#### As Needed Technical Assistance

Vendor will be required, at no charge to the City, to provide technical assistance for a minimum of one (1) day per month, if needed, and as requested at the times specified by the City Water/Wastewater Treatment Facilities Operator or designee. The technical assistance may require a representative to come to the City Water/Wastewater Treatment Facility if the City Water/Wastewater Treatment Facility Operator determines that the problem cannot be corrected over the phone or by e-mail.

Emergency Technical Assistance

In the case of an emergency, Vendor shall provide technical assistance with twenty-four (24) hours of notification of such need. To ensure that this requirement can be met, the City further requires Vendor to have a qualified technical representative residing in the State of Florida throughout the contract period. Vendor must provide a phone number for the technical representative as well as their location. In addition to the above times, additional technical assistance for a period of up to five (5) calendar days shall be required at the beginning of the contract period at no charge to the City.

**NON-CONFORMANCE**

Items may be tested/inspected for compliance with specifications by appropriate testing laboratories. The data derived from any tests for compliance with specifications are public records and open to examination thereto in accordance with Chapter 119, Florida Statutes. Items delivered not conforming to specifications may be rejected and returned at Vendor's expense. These items and items not delivered as per delivery date in purchase order may result in Vendor being found in default in which event all re-procurement costs may be charged against the defaulting Vendor.

Damages

In the event of substantial damage to the City Water and Wastewater Facilities, Vendor shall reimburse the City for the cost of any repair, maintenance or replacement resulting therefrom.



**Hydrofluorosilicic Acid**

Safety Data Sheet

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Revision date: 04/30/2015

Version: 1.0

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Product form : Mixture  
Product name : Hydrofluorosilicic Acid  
Product code : HFSA  
Formula :  $\text{H}_2\text{SiF}_6$  (aq)  
Synonyms : HFSA, Fluorosilicic acid

**1.2. Relevant identified uses of the substance or mixture and uses advised against**

Use of the substance/mixture : Industrial use

**1.3. Details of the supplier of the safety data sheet**

PCS Sales (USA), Inc.  
1101 Skokie Blvd.  
Suite 400  
Northbrook, IL 60062  
T 800-241-6908 / 847-849-4200

Suite 500  
122 1st Avenue South  
Saskatoon, Saskatchewan Canada S7K7G3  
T 800-667-0403 (Canada) / 800-667-3930 (USA)

[SDS@PotashCorp.com](mailto:SDS@PotashCorp.com) - [www.PotashCorp.com](http://www.PotashCorp.com)

**1.4. Emergency telephone number**

Emergency number : 800-424-9300  
CHEMTREC

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****GHS-US classification**

Acute Tox. 4 (Oral)	H302
Acute Tox. 4 (Inhalation:dust,mist)	H332
Skin Corr. 1A	H314
Eye Dam. 1	H318
Aquatic Acute 3	H402

**Hydrofluorosilicic Acid**

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**2.2. Label elements****GHS-US labelling**

Hazard pictograms (GHS-US)



Signal word (GHS-US)

: Danger

Hazard statements (GHS-US)

: H302 - Harmful if swallowed  
 H314 - Causes severe skin burns and eye damage  
 H318 - Causes serious eye damage  
 H332 - Harmful if inhaled  
 H402 - Harmful to aquatic life

Precautionary statements (GHS-US)

: P260 - Do not breathe fume, mist, vapours, spray  
 P264 - Wash hands and forearms thoroughly after handling  
 P270 - Do not eat, drink or smoke when using this product  
 P271 - Use only outdoors or in a well-ventilated area  
 P273 - Avoid release to the environment  
 P280 - Wear eye protection, face protection, protective gloves, protective clothing  
 P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting  
 P303+P361+P353 - IF ON SKIN (or hair): Remove/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 or doctor  
 P312 - Call a POISON CENTER or doctor if you feel unwell  
 P363 - Wash contaminated clothing before reuse  
 P405 - Store locked up  
 P501 - Dispose of contents/container according to local, regional, national, and international regulations

**2.3. Other hazards**

Hazardous to the aquatic environment

No additional information available

**SECTION 3: Composition/information on ingredients****3.1. Substances**

Not applicable

**3.2. Mixture**

Name	Product identifier	%	GHS-US classification
Fluorosilicic acid	(CAS No.) 16961-83-4	24	Acute Tox. 3 (Oral), H301 Acute Tox. 2 (Inhalation:dust,mist), H330 Skin Corr. 1A, H314



**Hydrofluorosilicic Acid**

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			Eye Dam. 1, H318 Aquatic Acute 3, H402
Water	(CAS No.) 7732-18-5	76	Not classified
Fluorides, as F		19	Not classified

**SECTION 4: First aid measures****4.1. Description of first aid measures**

- First-aid measures general : If exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation : Using proper respiratory protection, immediately move the exposed person to fresh air. Keep at rest and in a position comfortable for breathing. Give oxygen or artificial respiration if necessary. Seek immediate medical advice. Symptoms may be delayed.
- First-aid measures after skin contact : Remove/Take off immediately all contaminated clothing. Rinse immediately with plenty of water (for at least 15 minutes). Seek medical attention immediately if exposure is severe. Obtain medical attention if irritation develops or persists. Wash contaminated clothing before reuse.
- First-aid measures after eye contact : Immediately rinse with water for a prolonged period (at least 15 minutes) while holding the eyelids wide open. Seek medical attention immediately if exposure is severe. Obtain medical attention if irritation develops or persists.
- First-aid measures after ingestion : If swallowed, do not induce vomiting. Seek medical advice immediately and show this container or label.

**4.2. Most important symptoms and effects, both acute and delayed**

- Symptoms/injuries : Corrosive. Causes burns. Harmful if swallowed. Harmful if inhaled.
- Symptoms/injuries after inhalation : Causes severe respiratory irritation if inhaled. Symptoms may include: Burning of nose and throat, constriction of airway, difficulty breathing, shortness of breath, bronchial spasms, chest pain, and pink frothy sputum. Contact may cause immediate severe irritation progressing quickly to chemical burns. May cause pulmonary edema. Symptoms may be delayed.
- Symptoms/injuries after skin contact : Contact may cause immediate severe irritation progressing quickly to chemical burns.
- Symptoms/injuries after eye contact : Contact may cause immediate severe irritation progressing quickly to chemical burns. Can cause blindness.
- Symptoms/injuries after ingestion : May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract. Swallowing a small quantity of this material will result in serious health hazard.
- Chronic symptoms : Repeated or prolonged inhalation may damage lungs. Prolonged and repeated contact will eventually cause permanent tissue damage. Repeated and prolonged exposure to fluorine containing compounds may cause fluorosis, a condition characterized by changes in bone density and strength, accompanied by stiffness and pain in joints.

**4.3. Indication of any immediate medical attention and special treatment needed**

No additional information available

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**SECTION 5: Firefighting measures****5.1. Extinguishing media**

- Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.
- Unsuitable extinguishing media : Do not get water inside containers. Do not apply water stream directly at source of leak. Do not use a heavy water stream. A direct water stream will cause violent splattering and generation of heat.

**5.2. Special hazards arising from the substance or mixture**

- Fire hazard : Not flammable. Under conditions of fire this material may produce: Silicon oxides. Hydrogen fluoride. Tetrafluorosilane. Decomposes above 108 °C (227 °F)
- Explosion hazard : Product is not explosive.

**5.3. Advice for firefighters**

- Firefighting instructions : Keep upwind. Use water spray or fog for cooling exposed containers.
- Protection during firefighting : Firefighters must use full bunker gear including NIOSH-approved positive-pressure self-contained breathing apparatus to protect against potential hazardous combustion and decomposition products.
- Other information : Do not allow run-off from fire fighting to enter drains or water courses.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures****6.1.1. For non-emergency personnel**

- Protective equipment : Use recommended respiratory protection. Wear suitable protective clothing, gloves and eye/face protection.
- Emergency procedures : Stop leak if safe to do so. Eliminate ignition sources. Evacuate unnecessary personnel. Ventilate area. Keep upwind.

**6.1.2. For emergency responders**

- Protective equipment : Use recommended respiratory protection. Wear suitable protective clothing, gloves and eye/face protection.
- Emergency procedures : Stop leak if safe to do so. Eliminate ignition sources. Evacuate unnecessary personnel. Ventilate area.

**6.2. Environmental precautions**

If spill could potentially enter any waterway, including intermittent dry creeks, contact the U.S. COAST GUARD NATIONAL RESPONSE CENTER at 800-424-8802. In case of accident or road spill notify CHEMTREC at 800-424-9300. In other countries call CHEMTREC at (International code) +1-703-527-3887.

**6.3. Methods and material for containment and cleaning up**

- For containment : Contain any spills with dikes or inert absorbents to prevent migration and entry into sewers or streams. Do not allow into drains or water courses or dispose of where ground or surface waters may be affected.



**Hydrofluorosilicic Acid**

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**Methods for cleaning up**

: Ventilate area. Small quantities of liquid spill: take up in non-combustible inert absorbent material and shovel into container for disposal. Collect absorbed material and place into a sealed, labelled container to be disposed at an appropriate disposal facility according to current applicable laws and regulations and product characteristics at the time of disposal.

Liquid spill: neutralize with powdered limestone or sodium bicarbonate.

Practice good housekeeping – spillage can be slippery on smooth surface either wet or dry.

**6.4. Reference to other sections**

No additional information available

**SECTION 7: Handling and storage****7.1. Precautions for safe handling****Precautions for safe handling**

: Avoid all eyes and skin contact and do not breathe vapour and mist. Wear recommended personal protective equipment. Ensure there is adequate ventilation. Keep away from heat and open flame. Employ good maintenance practices to prevent leaks. Use good process control measures to prevent releases.

**Hygiene measures**

: Handle in accordance with good industrial hygiene and safety procedures. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Wash contaminated clothing before reuse.

**7.2. Conditions for safe storage, including any incompatibilities****Incompatible materials**

: Reacts with many metals to produce flammable and explosive hydrogen gas.

**Prohibitions on mixed storage**

: Keep away from strong acids and bases, chlorites, organic peroxides, combustible materials, and metals.

**Storage area**

: Store in dry, cool area. Store in a well-ventilated place away from heat and sources of ignition. Large tanks should be bermed and electrically grounded. Keep away from combustible materials. Avoid using glass, metal, or stoneware containers.

**7.3. Specific end use(s)**

Industrial use.

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters**

Fluorides		
USA ACGIH	TWA	2.5 mg/ m <sup>3</sup>
USA OSHA	TWA	2.5 mg/ m <sup>3</sup>
USA NIOSH	TWA	2.5 mg/ m <sup>3</sup>

**8.2. Exposure controls****Appropriate engineering controls**

: Ensure adequate ventilation, especially in confined areas.

**Hydrofluorosilicic Acid**

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Personal protective equipment : Protective goggles. Face shield. Gas mask at concentration in the air > > TLV.  
Protective clothing.



Hand protection : Impermeable protective gloves, such as: nitrile, neoprene, or PVC. Wear gauntlet gloves. Check glove manufacturer's permeation / degradation information.

Eye protection : Chemical safety goggles. Face shield. Do not wear contact lenses.

Skin and body protection : Wear suitable protective clothing. Chemical resistant suit. Rubber apron, boots.

Respiratory protection : Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits. Use respirator approved for acid fumes and mist.

Environmental exposure controls : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Physical state	: Liquid
Colour	: Water white to straw yellow.
Odour	: Pungent
Odour threshold	: No data available
pH	: 1.5 - 2
pH solution	: 10 %
Molecular mass	: 144 g/mol (Hydrofluorosilicic acid)
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: -18 - -20 °C (-1 - -4 °F)
Freezing point	: No data available
Boiling point	: 136 - 163 °C (277 - 326 °F)
Flash point	: No data available
Self ignition temperature	: No data available
Decomposition temperature	: 108 °C (227 °F)
Flammability (solid, gas)	: No data available
Vapour pressure	: 24 mm Hg at 25 °C (77 °F)
Relative vapour density at 20 °C	: No data available
Relative density	: 1.2 at 24 °C (75 °F)
Density	: 10.3 lb/gal
Solubility	: Water: Miscible
Log Pow	: No data available



**Hydrofluorosilicic Acid**

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Log Kow	: No data available
Viscosity	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

**9.2. Other information**

No additional information available

**SECTION 10: Stability and reactivity****10.1. Reactivity**

May react violently with water.

**10.2. Chemical stability**

Stable at standard temperature and pressure.

**10.3. Possibility of hazardous reactions**

Hazardous polymerization will not occur.

**10.4. Conditions to avoid**

Temperatures above 108 °C (227 °F).

**10.5. Incompatible materials**

Keep away from strong acids and bases, chlorites, organic peroxides, combustible materials, and metals. Attacks glass and stoneware.

**10.6. Hazardous decomposition products**

Thermal decomposition generates : Silicon oxides. Hydrogen fluoride. Tetrafluorosilane.

**SECTION 11: Toxicological information****11.1. Information on toxicological effects**

Acute toxicity : Harmful if swallowed. Harmful if inhaled.

<b>Fluorosilicic acid (16961-83-4)</b>	
LD50 oral rat	125 mg/kg
LC50 inhalation rat (mg/l)	0.28 mg/l (reported as 1.11 mg/l/1h)

Skin corrosion/irritation : Causes severe skin burns and eye damage.

pH: 1.5 - 2

Serious eye damage/irritation : Causes serious eye damage.

pH: 1.5 - 2

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

<b>Fluorosilicic acid (16961-83-4)</b>	
IARC group	3

Reproductive toxicity : Not classified

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Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

**SECTION 12: Ecological information****12.1. Toxicity**

Ecotoxicity	EPA Ecological Toxicity rating :	No data available.
	Acute Toxicity to Fish:	No data available.
	Chronic Toxicity to Fish:	No data available.
	Acute Toxicity to Aquatic Invertebrates:	(Frog) Subcutaneous: LD <sub>50</sub> = 140 mg/kg.
	Chronic Toxicity to Aquatic Invertebrates:	No data available.
	Acute Toxicity to Aquatic Plants:	No data available.
	Toxicity to Soil Dwelling Organisms:	No data available.
	Toxicity to Terrestrial Plants:	No data available.
Environmental Fate:	Stability in Water:	Product is NSF certified to ANSI Standard 60 for the fluoridation of municipal water supplies.
	Stability in Soil:	No data available.
	Transport and Distribution:	No data available.
Toxicity:	No data available	
Degradation Products:	Biodegradation:	No data available.
	Photodegradation:	No data available.

**SECTION 13: Disposal considerations****13.1. Waste treatment methods**

Sewage disposal recommendations : This material is hazardous to the aquatic environment. Keep out of sewers and waterways.

Waste disposal recommendations : Place in an appropriate container and dispose of contaminated material at a licensed site.

Additional information : Dispose of waste material in accordance with all local, regional, national, and international regulations.

**SECTION 14: Transport information**

In accordance with DOT / TDG / ADR / RID / ADNR / IMDG / ICAO / IATA

**14.1. UN number**

UN-No.(DOT) : 1778

DOT NA no. UN1778

**14.2. UN proper shipping name**

DOT Proper Shipping Name : Fluorosilicic acid

Department of Transportation (DOT) : 8 - Class 8 - Corrosive material 49 CFR 173.136

Hazard Classes



**Hydrofluorosilicic Acid**

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Hazard labels (DOT) : 8 - Corrosive substances



Packing group (DOT) : II - Medium Danger

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:  $t_r$  is the maximum mean bulk temperature during transport,  $t_f$  is the temperature in degrees celsius of the liquid during filling, and  $\alpha$  is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling ( $t_f$ ) and the maximum mean bulk temperature during transportation ( $t_r$ ) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where:  $d_{15}$  and  $d_{50}$  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 Packaging Non Bulk (49 CFR 173.xxx) : 202

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

**14.3. Additional information**

Emergency Response Guide (ERG) Number : 154

Other information : No supplementary information available.

**Hydrofluorosilicic Acid**

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**Overland transport**

No additional information available

**Transport by sea**

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

**Air transport**

DOT Quantity Limitations Passenger : 1 L  
aircraft/rail (49 CFR 173.27)

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

IATA ERG Number : 8L

**SECTION 15: Regulatory information****15.1. US Federal regulations**

Hydrofluorosilicic Acid	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard
Fluorosilicic acid (16961-83-4)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

**15.2. US State regulations**

The following states have an OSH program approved by OSHA. If you are located in any of these states you may be under state jurisdiction rather than federal jurisdiction and your state may have more stringent requirements than OSHA. You should consult your state regulations to ensure compliance.

Alaska	Indiana	Minnesota	North Carolina	Utah
Arizona	Iowa	Nevada	Oregon	Vermont
California	Kentucky	New Mexico	Puerto Rico	*Virgin Islands
*Connecticut	Maryland	*New Jersey	South Carolina	Virginia
Hawaii	Michigan	*New York	Tennessee	Washington
*Illinois				Wyoming

\*The state plans in these states apply only to public sector employers. In these states private sector employers are subject to USOL – OSHA jurisdiction. All other state plans apply to both public and private sector employers.

Fluorosilicic acid (16961-83-4)
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Conc. - Reporting Category 1
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Conc. - Reporting Category 2
U.S. - Massachusetts - Oil & Hazardous Material List - Reportable Quantity
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 1
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 2
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - New Jersey - Special Health Hazards Substances List
U.S. - Texas - Effects Screening Levels - Long Term



**Hydrofluorosilicic Acid**

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U.S. - Texas - Effects Screening Levels - Short Term

**15.3. Canadian regulations****Hydrofluorosilicic Acid****WHMIS Classification**

Class D Division 1 Subdivision A - Very toxic material causing immediate and serious toxic effects  
 Class E - Corrosive Material

**Fluorosilicic acid (16961-83-4)**

Listed on the Canadian DSL (Domestic Substances List) inventory.

Listed on the Canadian Ingredient Disclosure List – Disclosure at 1%.

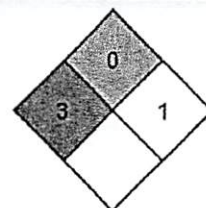
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

**SECTION 16: Other information**

NFPA health hazard : 3 - Short exposure could cause serious temporary or residual injury even though prompt medical attention was given.

NFPA fire hazard : 0 - Materials that will not burn.

NFPA reactivity : 1 - Normally stable, but can become unstable at elevated temperatures and pressures or may react with water with some release of energy, but not violently.



Full text of H-phrases:

Acute Tox. 2 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 2
Acute Tox. 3 (Oral)	Acute toxicity (oral) Category 3
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Skin Corr. 1A	skin corrosion/irritation Category 1A
H301	Toxic if swallowed
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H330	Fatal if inhaled
H332	Harmful if inhaled

Previous PotashCorp MSDS Number : MSDS 52 – Hydrofluorosilicic Acid

SDS US (GHS HazCom 2012)

**Hydrofluorosilicic Acid**

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## SAFETY DATA SHEET

SDS No: 068-GHS

## SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

## Product Identifier

Product Name: Fluorosilicic Acid

Synonyms: Hydrofluorosilicic Acid, Hexafluorosilicic Acid, Hydrosilicofluoric Acid

## Relevant Identified Uses of the Substance or Mixture and Uses Advised Against:

Product Use: Various commercial and industrial uses

## Manufacturer:

SIBELCO NORTH AMERICA, INC.

7638 South 226 Hwy

Spruce Pine, NC 28777 USA

Emergency Telephone Number

(828) 765-4283

Telephone Number for Information

(828) 765-4283

SDS Date of Preparation/Revision: May 2018

## SECTION 2: HAZARDS IDENTIFICATION

## GHS/ Hazcom 2012/WHMIS 2015 Classification:

Physical:	Health:	Environmental
Not Hazardous	Acute Toxicity Category 3 (Dermal) Acute Toxicity Category 4 (Oral, Inhalation) Skin Corrosion Category 1	Not Hazardous

GHS/Hazcom 2012/WHMIS 2015 Label:



## DANGER!

## Statements of Hazard

Harmful if swallowed.

Toxic in contact with skin.

Harmful if inhaled

Causes severe skin burns and eye damage.

## Response:

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with soap and water.

Wash contaminated clothing before reuse.

Immediately call a POISON CENTER or doctor.

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 doctor.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Immediately call a POISON CENTER or doctor.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

Immediately call a POISON CENTER or doctor.

## Storage:

Store locked up.

## Disposal:

Dispose of contents/containers in accordance with local regulation

## Prevention:

Do not breathe mist, vapors, or spray.

Wash exposed skin thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

Wear protective gloves, protective clothing, eye protection, and face protection.

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

CAS#	Component	Percentage
7732-18-5	Water	74%
16961-83-4	Fluorosilicic Acid	10-30%
7647-01-0	Hydrochloric Acid	<3%
7664-39-3	Hydrofluoric Acid	<1%

**SECTION 4: FIRST AID MEASURES**

**Gross Inhalation:** Remove victim to fresh air. If breathing has stopped, perform artificial respiration. If breathing is difficult have qualified personnel administer oxygen. Get immediate medical attention. Lung effects may be delayed – medical observation is recommended.

**Skin Contact:** Immediately remove all contaminated clothing and shoes. Flush skin thoroughly with water for at least 15 minutes. Launder clothing before reuse. Discard contaminated items, such as shoes, that cannot be decontaminated. Get immediate medical attention. Skin effects may be delayed.

**Eye Contact:** Flush the eyes immediately with large amounts of running water, lifting the upper and lower lids occasionally for at least 15 minutes. Get immediate medical attention.

**Ingestion:** If the victim is conscious, rinse mouth with water and give one glass of water or milk to drink. Do not induce vomiting. Do not give anything by mouth to an unconscious or convulsing person. Get immediate medical attention.

**Most Important Symptoms and Effects, Both Acute and Delayed:** Corrosive. May cause burns to the eyes and skin. Skin burns may not be apparent or painful for several hours. Inhalation of vapors or mists may cause severe mucous membrane and respiratory irritation with possible lung damage. May be harmful or fatal if swallowed. Effects of overexposure may be delayed. Chronic exposure may cause fluorosis with effects on the teeth and bones.

**Indication of immediate medical attention and Special Treatment Needed:** If any contact occurs, get immediate medical attention.

**SECTION 5: FIREFIGHTING MEASURES**

**Suitable Extinguishing Media:** This product will not burn but is compatible with all extinguishing media. Use any media that is appropriate for the surrounding fire.

**Specific Hazards Arising from the Chemical:**

**Unusual Fire and Explosion Hazards:** This product is a water solution and is not flammable. Thermal decomposition may yield flammable, corrosive and toxic gases. This product may react with metals to form flammable and explosive hydrogen gas.

**Hazardous Combustion Products:** Thermal decomposition yields hydrogen silica tetrafluoride and hydrogen fluoride gas.

**Special Protective Equipment and Precautions for Fire-Fighters:** Prevent contact with eyes, skin and clothing. Firefighters should wear self-contained breathing apparatus and full protective clothing.

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

**Personal Precautions, Protective Equipment and Emergency Procedures:** Wear appropriate protective equipment.

**Environmental Precautions:** Report spills and releases as required to appropriate authorities.

**Methods and Material for Containment/Cleanup:** Ventilate area. Contain spill and collect with absorbent material and place in appropriate container for disposal. Flush spill area with water.



**SECTION 7: HANDLING AND STORAGE**

**Precautions for Safe Handling:** Avoid creating and breathing mists. Avoid breathing vapors. Prevent eye, skin and clothing contact. Wash thoroughly with soap and water after handling.

Use only with adequate ventilation. Maintain and use proper, clean protective equipment (See Section 8). Launder contaminated clothing before reuse. **WARN** and **TRAIN** employees in accordance with state and federal regulations.

**WARN YOUR EMPLOYEES (AND YOUR CUSTOMERS AND USERS IN CASE OF RESALE) BY POSTING, AND OTHER MEANS, OF THE HAZARDS AND OSHA PRECAUTIONS AND ANY OTHER APPLICABLE REGULATORY PRECAUTIONS TO BE USED. PROVIDE TRAINING FOR YOUR EMPLOYEES ABOUT OSHA PRECAUTIONS.**

**Conditions for Safe Storage, Including any Incompatibilities:** Store in a cool, dry, well-ventilated area. Keep away from metals. Reaction with metals will generate flammable hydrogen gas.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION****Exposure Guidelines:**Definitions:

MSHA means Mine Safety and Health Administration.

NIOSH means National Institute for Occupational Safety and Health.

OSHA means Occupational Safety and Health Administration.

PEL means OSHA Permissible Exposure Limit.

REL means the NIOSH Recommended Exposure Limit.

TLV means American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value.

TWA means time-weighted average.

Fluorosilicic Acid: PEL – 2.5 mg/m<sup>3</sup> TWA (as Fluorides)  
TLV- 2.5 mg/m<sup>3</sup> TWA (as Fluorides)  
MSHA - 2.5 mg/m<sup>3</sup> TWA (as Fluorides)

Hydrochloric Acid: PEL - 5 ppm Ceiling  
TLV- 2 ppm Ceiling  
MSHA - 5 ppm Ceiling

Hydrofluoric Acid: PEL – 3 ppm TWA  
TLV- 0.5 ppm TWA, 2 ppm Ceiling skin (as F)  
MSHA - 3 ppm TWA

**Appropriate Engineering Controls:** Use local exhaust as required to maintain exposures below applicable occupational exposure limits. See also ACGIH "Industrial Ventilation - A Manual for Recommended Practice" (current edition). Control of exposure must be accomplished as far as feasible by accepted engineering control measures (for example, enclosure or confinement of the operation, general or local exhaust ventilation and substitution of less toxic materials).

**Personal Protective Equipment:**

**Respiratory Protection:** When effective engineering controls are not feasible, or while they are being implemented, appropriate respiratory protection must be used. Use appropriate respiratory protection for respirable particulates based on consideration of airborne workplace concentrations and duration of exposure arising from intended end use. Refer to the most recent government and local standards.

**Gloves:** Chemical resistant gloves recommended.

**Eye Protection:** Chemical safety goggles and/or face shield recommended.

**Other Protective Equipment/Clothing:** Chemical resistant clothing and boots as needed to prevent skin contact. A safety shower and eye wash should be available in the work area.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

<b>Form:</b>	Liquid	<b>Appearance:</b>	Water white to straw yellow
<b>Viscosity:</b>	Not applicable	<b>Odor:</b>	Pungent odor
<b>pH:</b>	Not applicable	<b>Odor Threshold:</b>	Not applicable
<b>Boiling Point/Range:</b>	105.56°C / 222°F	<b>Vapor Density:</b>	Not applicable
<b>Melting point/freezing point:</b>	-20°C / -4°F	<b>Evaporation Rate:</b>	Not applicable
<b>Flammability (solid, gas):</b>	Water solution, will not burn	<b>Partition coefficient (n-octanol/water):</b>	Not applicable
<b>Decomposition Temperature:</b>	Non-combustible	<b>Vapor Pressure:</b>	218 mmHg @ 75°
<b>Flash Point:</b>	Not applicable	<b>Relative Density:</b>	1.223
<b>Lower Explosion Limit:</b>	Not applicable	<b>Solubilities:</b>	Completely soluble in water
<b>Upper Explosion Limit:</b>	Not applicable	<b>Autoignition Temperature:</b>	Non-combustible

**SECTION 10: STABILITY AND REACTIVITY**

**Reactivity:** Reacts with metals to form flammable hydrogen gas.

**Chemical Stability:** This product is stable at normal temperatures.

**Possibility of Hazardous Reactions:** Contact with metals may form flammable hydrogen gas.

**Conditions to Avoid:** None

**Incompatible Materials:** Metals, glass, stoneware, alkali, strong concentrated acids.

**Hazardous Decomposition Products:** Thermal decomposition yields hydrogen silica tetrafluoride and hydrogen fluoride gas.

**SECTION 11: TOXICOLOGICAL INFORMATION****Information on Toxicological Effects****Potential Health Effects:**

**Inhalation:** Inhalation of vapors or mists may cause severe irritation of the nose, throat and respiratory passages. High concentrations may cause lung damage (edema) with symptoms of chest pain and difficulty breathing. The effects may be delayed for several hours and are aggravated by physical exertion.

**Skin Contact:** May cause severe irritation and chemical burns. Burns may not be apparent for several hours.

**Eye Contact:** Contact may cause severe irritation or chemical burns with possible permanent damage.

**Ingestion:** Swallowing may cause irritation and burns to the mouth, throat and gastrointestinal tract with nausea, weakness and shock. Severe damage, which may be fatal, may occur.



**Chronic Health Effects:** Prolonged absorption of fluorides may result in fluorosis. Symptoms include changes in bone density (osteosclerosis), ossification of ligaments and mottling of the dental enamel.

**Signs and Symptoms of Exposure:** Overexposure to mists may cause mucous membrane and respiratory irritation, cough, sore throat, nasal congestion, sneezing and shortness of breath. Eye and skin contact may cause redness, burning, pain and swelling.

**Acute Toxicity Values:** Fluorosilicic Acid: LD50 oral rat 430 mg/kg  
Hydrochloric Acid: LC50 Inhalation rat 3124 ppm/ 1 hour.  
Hydrofluoric Acid: LC50 Inhalation rat 1276 ppm/1 hr

**Skin Sensitization:** Not a skin sensitizer in animals or humans.

**Repeated Dose Toxicity:** No specific data is available.

**Carcinogenicity:** None of the components of this product are listed as carcinogens or suspected carcinogens by IARC, NTP or OSHA.

**Developmental / Reproductive Toxicity:** No specific data is available.

**Genetic Toxicity:** No specific data is available.

#### SECTION 12: ECOLOGICAL INFORMATION

**Toxicity:** Fluorosilicic Acid: *Lepomis macrochirus* 96hr LC50: 50 mg/L; *Daphnia magna* 48hr EC50: 270 mg/L  
Hydrofluoric Acid: *Oncorhynchus mykiss*: 96hr LC50 51 mg/L; *Daphnia magna* 48hr EC50: 26-48 mg/L

**Persistence and Degradability:** This product is expected to be highly degradable.

**Bioaccumulative Potential:** Not expected to bioaccumulate.

**Mobility in Soil:** Not applicable.

**Results of PBT and vPvB Assessment:** None required.

**Other Adverse Effects:** None known

#### SECTION 13: DISPOSAL CONSIDERATIONS

**Waste Treatment Methods:**

This product, as produced, is classified as a hazardous waste under US EPA RCRA regulations – characteristic corrosive (D002). Dispose in accordance with all applicable local, state/provincial and federal regulations. Local regulations may be more stringent than regional and national requirements. It is the responsibility of the waste generator to determine the toxicity and physical characteristics of the material to determine the proper waste identification and disposal in compliance with applicable regulations.

**SECTION 14: TRANSPORT INFORMATION****U.S. DOT HAZARD CLASSIFICATION**

Proper Shipping Name: Fluorosilicic Acid

Technical Name: N/A

UN Number: UN1778

Hazard Class/Packing Group: 8, 11

Labels Required: Corrosive

DOT Packaging Requirements: 173.202, 173.242

Exceptions: None

**SECTION 15: REGULATORY INFORMATION**

**SARA 311/312:** Hazard Categories for SARA Section 311/312 Reporting: Acute health

**SARA 313** This Product Contains the Following Chemicals Subject to Annual Release Reporting Requirements Under the SARA Section 313 (40 CFR 372): Hydrochloric Acid <3%, Hydrofluoric Acid <1%

**CERCLA Section 103 Reportable Quantity:** Product: 10,000 lbs. (Hydrofluoric Acid 100 lbs.)

**California Proposition 65:** This product does not contain substances regulated under California Proposition 65.

**Toxic Substances Control Act:** All of the components of this product are listed on the EPA TSCA Inventory or exempt from premanufacture notification requirements.

**EU Inventory:** All of the components of this product are listed on the EINECS inventory or exempt from notification requirements.

**EU REACH Status:** This substance is exempt from REACH registration.

**Canadian Environmental Protection Act:** All the components of this product are listed on the Canadian Domestic Substances List or exempt from notification requirements.

**Japan METI:** All of the components of this product are existing chemical substances as defined in the Chemical Substance Control Law.

**Australian Inventory of Chemical Substances:** All of the components of this product are listed on the AICS inventory or exempt from notification requirements.

**Korea:** All of the components of this product are listed on the KECL inventory or exempt from notification requirements.

**Philippines:** All of the components of this product are listed on the PICCS inventory or exempt from notification requirements.

**New Zealand:** All of the components of this product are listed on the HSNO inventory or exempt from notification requirements.

**China:** All of the components of this product are listed on the IECSC inventory or exempt from notification requirements.

**Taiwan:** All of the components of this product are listed on the CSNN inventory or exempt from notification requirements.



## EXHIBIT B - Safety Data Sheets

CONTRACT # WRS/200001

SDS No: 068-GHS

### 16: OTHER INFORMATION

NFPA Hazard Rating: Health: 3 Fire: 0 Reactivity: 0

HMIS Hazard Rating: Health: 3 Fire: 0 Reactivity: 0

References:

Registry for Toxic Effects of Chemical Substances (RTECS), 2017

Patty's Industrial Hygiene and Toxicology

NTP Twelfth Report on Carcinogens, 2011

Hazardous Substances Data Bank (HSDB), 2017

SDS Date of Preparation/Revision: May 2018

Revision Summary: Company Name Change & Phone Number Change

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