



# Mid-Michigan Water Chemical Consortium 2022-2023

## Alexander Chemical Corporation Supplier Response

### Event Information

Number: Mid-Michigan Water Chemical Consortium 2022-2023  
Title: 2022040622  
Type: Request for Proposal- Sealed  
Issue Date: 4/6/2022  
Deadline: 4/15/2022 02:00 PM (ET)  
Notes: Notice to Bidders:

Sealed Proposals in response to this Request for Proposal (“RFP”) will be received by the Board of Water and Light (“BWL”) for Mid-Michigan Water Chemical Consortium 2022-2023.

Proposals must be in full accordance with the enclosed Scope of Work.

Proposals must be submitted through IonWave. Proposals received via e-mail will not be accepted.

The BWL reserves the right to reject any or all Proposals, waive irregularities or technicalities in any Proposal, and accept any Proposal in whole or in part, which in the opinion of the BWL, is in its best interest. The BWL does not limit the methods or factors to be used for evaluation.

### Contact Information

Contact: Rachelle Hall  
Address: 1110 South Pennsylvania Ave.

Lansing, MI 48912  
Email: rachelle.hall@lbwl.com

## Alexander Chemical Corporation Information

Contact: John Dunlap  
Address: 7593 S First Road  
LaPorte, IN 46350  
Phone: (219) 393-5558  
Fax: (219) 393-5364  
Toll Free: (800) 348-8827  
Email: john.dunlap@alexchem.com  
Web Address: www.alexanderchemical.com

By submitting your response, you certify that you are authorized to represent and bind your company.

Jennifer Stewart

*Signature*

Submitted at 4/13/2022 12:47:06 PM

bids@alexchem.com

*Email*

## Supplier Note

Thank you for the opportunity to bid! Please be sure to check all line items for special notes! Regards, Jennifer Stewart Bid Specialist

## Requested Attachments

### Exceptions to Terms and Conditions (if applicable)

*No response*

### Sworn and Notarized Affidavit of Compliance

Sworn\_and\_Notarized\_Affidavit\_of\_Compliance\_-\_Iran\_Economic\_Sanctions\_Act.pdf

### Other Attachment

*No response*

## Response Attachments

### Authorization Signatures.pdf

Authorized Signatures

### Alexander Chemical Corporation(29993).pdf

Alexander Certificate of Insurance

### NSF-AINSI REPORT\_4-8-22.pdf

NSF/AINSI REPORT

### ALEX - SOD HYPO.docx

Sodium Hypochlorite - References

### Sodium Hypochlorite 15 trade% pss.pdf

Sodium Hypochlorite - Product Specification Sheet (PSS)

### Sodium hypochlorite solution SDSrev2021.pdf

Sodium Hypochlorite - SDS

### ALEX - HFS.docx

Hydrofluosilicic Acid - References

### Hydrofluosilicic acid PSS.pdf

Hydrofluosilicic Acid - Product Specification Sheet (PSS)

**Bid Attributes**

|           |  |
|-----------|--|
| <b>1</b>  | <p><b>Company Contact</b></p> <p>Please provide the primary contact's name, e-mail, and phone number for this proposal.</p> <p>John Dunlap, John.Dunlap@alexchem.com, 800-348-8827 or cell: 773-875-5140</p>   |
| <b>2</b>  | <p><b>How many years has your firm been in business under the present ownership?</b></p> <p>40</p>   |
| <b>3</b>  | <p><b>Have you done business with the Board of Water and Light? If so, furnish specifics.</b></p> <p>Yes, Contract # 4600001304, 460000877, 46000000722, 723, 726, 729, 4600001742</p>   |
| <b>4</b>  | <p><b>Have you done business with the City of Lansing? If so, furnish specifics.</b></p> <p>Yes, supplying Sodium Hypochlorite</p>   |
| <b>5</b>  | <p><b>Have you ever defaulted on a contract or been involved in litigation with the BWL or the City of Lansing? If so, furnish specifics.</b></p> <p>NO</p>  |
| <b>6</b>  | <p><b>Have you ever defaulted on a contract or been involved in litigation with any other client in the past five years? If so, furnish specifics.</b></p> <p>No</p>   |
| <b>7</b>  | <p><b>List any relationships between your firm's staff and any current BWL employee.</b></p> <p>None</p>   |
| <b>8</b>  | <p><b>List at least three (3) references for similar work you have performed for other clients. Include client's name, contact name, title and phone number.</b></p> <p>*** SEE ATTACHED REFERENCES ***</p>  |
| <b>9</b>  | <p><b>List subcontractors that you plan to use on this project.</b></p> <p>None</p>  |
| <b>10</b> | <p><b>Indicate any exceptions to the enclosed Terms and Conditions</b></p> <p>If YES, Contractor must provide red-lined editing on the BWL Terms and Conditions Microsoft Word document only. Any submission of, or general references to Contractor Terms and Conditions in its entirety anywhere within the proposal will invalidate the proposal.</p> <p>No</p> |
| <b>11</b> | <p><b>Acknowledgment of receipt of any Addendas issued.</b></p> <p>Yes</p>   |
| <b>12</b> | <p><b>Confirm you have reviewed all attachments included in this solicitation.</b></p> <p><input checked="" type="checkbox"/> Yes (Yes)</p>  |

|        |   |
|--------|---|
| 1<br>3 | <b>Product meets quality specifications in the Scope of Work?</b><br><br><input type="text" value="Yes"/> |
|--------|---|

|        |  |
|--------|--|
| 1<br>4 | <b>Able to meet delivery requirements for each municipality in the Scope of Work?</b><br>Including but not limited to delivery days of week, hours, load size, unloading requirements.<br><br><input type="text" value="Yes"/> |
|--------|--|

|        |   |
|--------|---|
| 1<br>5 | <b>I have read and agreed.</b><br><br>The Bidder states that this proposal is made in conformity with the Proposal Documents and agrees that, in the event of any discrepancies or differences between any conditions of their proposal and the Proposal Documents provided in the Instructions to Bidders and completed by the bidder, the provisions of the latter shall prevail. No verbal or written agreements or understandings considered or entered into prior to signing of a contract in the form of a purchase order, shall be binding after the signing of the contract unless incorporated in the contract.<br><br>The Bidder certifies that this proposal is made in good faith, upon the best information, with knowledge and accuracy, and without collusion or connection with any other person or persons submitting proposals for the work.<br><input checked="" type="checkbox"/> I have read and agreed (I have read and agreed) |
|--------|---|

**Bid Lines**

|   |   |
|---|---|
| 1 | <b>Sodium Hypochlorite (per gallon)</b><br>Quantity: <u>  1  </u> UOM: <u>  GAL  </u> Price: <input type="text" value="\$2.185"/> Total: <input type="text" value="\$2.19"/><br>Supplier Notes: <input type="text" value="PRICING IS FIRM CALENDAR QUARTERLY ONLY!"/> |
|---|---|

|   |  |
|---|--|
| 2 | <b>Sodium Hypochlorite Demurrage (first 4 hours free)</b><br>Quantity: <u>  1  </u> UOM: <u>  HR  </u> Price: <input type="text" value="\$75.00"/> Total: <input type="text" value="\$75.00"/><br>Supplier Notes: <input type="text" value="FIRST 4 HOURS ARE FREE - \$75.00 PER HOUR THEREAFTER."/> |
|---|--|

|   |  |
|---|--|
| 3 | <b>Hydrofluosilic Acid- 40,000 lbs. minimum shipments</b><br>Quantity: <u>  1  </u> UOM: <u>  ton  </u> Price: <input type="text" value="\$469.00"/> Total: <input type="text" value="\$469.00"/><br>Supplier Notes: <input type="text" value="40,000 LBS MINIMUM. ** SEE MULTIPLE LOCATION LINE #5 PRICING (\$100.00 MULTI STOP FEE)**"/> |
|---|--|

|   |  |
|---|--|
| 4 | <b>Hydrofluosilic Acid- 30,000 lbs. minimum shipments</b><br>Quantity: <u>  1  </u> UOM: <u>  ton  </u> Price: <input type="text" value="\$499.00"/> Total: <input type="text" value="\$499.00"/><br>Supplier Notes: <input type="text" value="30,000 LBS - 39,999 LBS."/> |
|---|--|

|   |   |
|---|---|
| 5 | <b>Hydrofluosilic Acid- multiple locations in 40,000 lbs. minimum shipments</b><br>Quantity: <u>  1  </u> UOM: <u>  ton  </u> Price: <input type="text" value="\$469.00"/> Total: <input type="text" value="\$469.00"/><br>Supplier Notes: <input type="text" value="40,000 LBS MINIMUM - \$100.00 MULTI STOP FEE."/> |
|---|---|

|   |  |
|---|--|
| 6 | <b>Hydrofluosilic Acid- Demurrage (first 4 hours free)</b><br>Quantity: <u>  1  </u> UOM: <u>  hr  </u> Price: <input type="text" value="\$75.00"/> Total: <input type="text" value="\$75.00"/><br>Supplier Notes: <input type="text" value="FIRST 4 HOURS ARE FREE - \$75.00 PER HOUR THEREAFTER"/> |
|---|--|

|    |   |               |
|----|---|---------------|
| 7  | Ferric Chloride- Dry<br>Quantity: <u>  1  </u> UOM: <u> ton </u>                            | <b>No Bid</b> |
| 8  | Ferric Chloride-Liquid<br>Quantity: <u>  1  </u> UOM: <u> ton </u>                          | <b>No Bid</b> |
| 9  | Ferric Chloride-Demurrage (first 4 hours free)<br>Quantity: <u>  1  </u> UOM: <u> hr </u>   | <b>No Bid</b> |
| 10 | Pebble Quicklime<br>Quantity: <u>  1  </u> UOM: <u> ton </u>                                | <b>No Bid</b> |
| 11 | Pebble Quicklime- Demurrage (first 4 hours free)<br>Quantity: <u>  1  </u> UOM: <u> hr </u> | <b>No Bid</b> |
| 12 | Soda Ash<br>Quantity: <u>  1  </u> UOM: <u> ton </u>  | <b>No Bid</b> |
| 13 | Soda Ash- Demurrage (first 4 hours free)<br>Quantity: <u>  1  </u> UOM: <u> hr </u>         | <b>No Bid</b> |

**Response Total: \$1,589.19**



## ALEXANDER CHEMICAL HFS REFERENCES

City of Battle Creek, MI  
250 Brigden Dr.  
Battle Creek, MI 49014  
Contact: Robert Koehn  
E-mail: [rjkoehn@battlecreekmi.gov](mailto:rjkoehn@battlecreekmi.gov)  
Phone: (269) 966-3339  
Fax: (269) 963-9222

Milwaukee Water Works, WI  
3000 N. Lincoln Memorial Drive  
Milwaukee, WI 53211  
Contact: Dan Welk  
E-mail: [Daniel.welk@milwaukee.gov](mailto:Daniel.welk@milwaukee.gov)  
Phone: (414) 286-2658  
Fax: (414) 286-8653

Hammond Water Filtration, IN  
925 Casino Center dr.  
Hammond, IN 46320  
Contact: Chuck Pietrucha  
E-mail: [pietruchac@gohammond.com](mailto:pietruchac@gohammond.com)  
Phone: (219) 853-6439  
Fax: (219) 473-9143

# ALEXANDER

ALEXANDER CHEMICAL CORPORATION

Rockford, IL  
425 S State St  
Rockford, IL 61114  
Contact: Sandi Leombruni  
Phone: 815-987-5712

West Chicago  
1400 W Hawthorne Lane  
West Chicago, IL 60185  
Phone: 630-738-8873

Barrington, IL  
616 Bryant Ave  
Barrington, IL 60010  
Contact: David  
Phone: 847-304-3358

7593 S First Road, LaPorte, IN 46350  
Tel 800.348.8827, Fax 219.393.5364

# ALEXANDER CHEMICAL CORPORATION REFERENCES

## Sodium Hypochlorite

City of Milwaukee  
841 North Broadway  
Milwaukee, WI 53202  
Contact: Nathan Churchill  
Phone: 414-286-2392

**- Deliver water and wastewater treatment chemicals.**

City of Mishawaka  
600 E Third Street  
Mishawaka, IN 46544  
Contact: David Majewski  
Phone: 574-258-1652

**- Deliver water and wastewater treatment chemicals.**

City of Goshen  
204 E Jefferson Street  
Goshen, IN 46528  
Contact: Keitha Windsor  
Phone: 574-537-3816

**- Deliver water and wastewater treatment chemicals.**

City of Wyoming  
16700 New Holland St.  
Holland, MI 49424-5554  
Contact: Jodi Heintzelman  
Phone: 616-530-7299

**- Deliver water and wastewater treatment chemicals.**

City of Napoleon, OH  
255 West River Avenue  
Napoleon, OH 43545  
Contact: Jeff Weis  
Phone: (419) 599-1235

**- Deliver water and wastewater treatment chemicals.**



# CERTIFICATE OF LIABILITY INSURANCE

DATE(MM/DD/YYYY)  
07/01/2021

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

**IMPORTANT:** If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

|   |  |               |
|---|--|---------------|
| <b>PRODUCER</b><br>Aon Risk Services Central, Inc.<br>Chicago IL Office<br>200 East Randolph<br>Chicago IL 60601 USA  | <b>CONTACT NAME:</b><br>PHONE (A/C. No. Ext): (866) 283-7122      FAX (A/C. No.): (800) 363-0105 |               |
|   | <b>E-MAIL ADDRESS:</b>   |               |
| <b>INSURER(S) AFFORDING COVERAGE</b>  |  | <b>NAIC #</b> |
| <b>INSURED</b><br>Alexander Chemical Corp<br>7593 S First Road<br>Kingsbury Industrial Park<br>Kingsbury IN 46345 USA | INSURER A: National Union Fire Ins Co of Pittsburgh 19445  |               |
|   | INSURER B: Commerce & Industry Ins Co 19410  |               |
|   | INSURER C: Granite State Insurance Company 23809   |               |
|   | INSURER D: Everest Indemnity Insurance Company 10851   |               |
|   | INSURER E:   |               |
|   | INSURER F:   |               |

Holder Identifier :

**COVERAGES**      **CERTIFICATE NUMBER: 570088264768**      **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS. **Limits shown are as requested**

| INSR LTR | TYPE OF INSURANCE   | ADDL INSD | SUBR WVD | POLICY NUMBER     | POLICY EFF (MM/DD/YYYY) | POLICY EXP (MM/DD/YYYY) | LIMITS  |
|----------|---|-----------|----------|-------------------|-------------------------|-------------------------|---|
| B        | <input checked="" type="checkbox"/> <b>COMMERCIAL GENERAL LIABILITY</b><br><input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR<br><br>GENL AGGREGATE LIMIT APPLIES PER:<br><input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC<br>OTHER: |           |          | GL4611644         | 07/01/2021              | 07/01/2022              | EACH OCCURRENCE \$2,000,000<br>DAMAGE TO RENTED PREMISES (Ea occurrence) \$300,000<br>MED EXP (Any one person) \$10,000<br>PERSONAL & ADV INJURY \$2,000,000<br>GENERAL AGGREGATE \$4,000,000<br>PRODUCTS - COMP/OP AGG \$4,000,000 |
| A        | <b>AUTOMOBILE LIABILITY</b><br><input checked="" type="checkbox"/> ANY AUTO<br><input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS<br><input checked="" type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY   |           |          | CA 7742278        | 07/01/2021              | 07/01/2022              | COMBINED SINGLE LIMIT (Ea accident) \$2,000,000<br>BODILY INJURY ( Per person)<br>BODILY INJURY (Per accident)<br>PROPERTY DAMAGE (Per accident)<br>Comp & Coll Ded \$1,000   |
| D        | <input checked="" type="checkbox"/> <b>UMBRELLA LIAB</b> <input checked="" type="checkbox"/> OCCUR<br><input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE<br><input type="checkbox"/> DED <input type="checkbox"/> RETENTION  |           |          | EF2CU00053211     | 07/01/2021              | 07/01/2022              | EACH OCCURRENCE \$5,000,000<br>AGGREGATE \$5,000,000  |
| C        | <b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b><br>ANY PROPRIETOR / PARTNER / EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)<br>If yes, describe under DESCRIPTION OF OPERATIONS below   |           | Y/N<br>N | WC014590635 (AOS) | 07/01/2021              | 07/01/2022              | <input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTHER<br>E.L. EACH ACCIDENT \$1,000,000<br>E.L. DISEASE-EA EMPLOYEE \$1,000,000<br>E.L. DISEASE-POLICY LIMIT \$1,000,000                                   |

Certificate No : 570088264768

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

**CERTIFICATE HOLDER****CANCELLATION**

|  |  |
|--|--|
| Alexander Chemical Corporation<br>7593 S First Road<br>Kingsbury Industrial Park<br>Kingsbury IN 46345 USA | SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. |
|  | <b>AUTHORIZED REPRESENTATIVE</b><br><br><i>Aon Risk Services Central, Inc.</i>   |





I, Amy Berggren, do hereby certify that I am a duly elected, qualified and acting Assistant Secretary of Carus Group Inc., a Delaware corporation, and as such have custody of the corporate records and seal.

I hereby further certify that the following resolutions were duly adopted by Unanimous Consent of the Board of Directors of Carus Group Inc. effective 1 January 2019 as of the date below pertaining to persons authorized to act for Carus Group Inc. and its member companies.

WHEREAS, the Board desires to grant to certain Carus Group officers specific spending authority necessary to the day-to-day performance of their respective functions;

IT IS FURTHER RESOLVED, that the Board hereby approves, for the purpose of signing sales contracts, municipal bids, purchase requisitions, capital expenditures, raw material supply contracts, and other day-to-day contracts and obligations of the Company, the officer spending authorizations included in the document titled "CARUS GROUP INC. AUTHORIZATION LEVELS – 1 January 2019," attached hereto as Exhibit 2.

In witness whereof I have hereunto set my hand and affixed the seal of the corporation on this 13<sup>th</sup> day of April 2022.

Amy Berggren  
Asst. Secretary

SEAL



**EXHIBIT 2**  
**CARUS GROUP INC.**  
**AUTHORIZATION LEVELS – 1 JANUARY 2019 \*\*\***

| <u>TITLE</u>                          | <u>REVENUE<br/>CONTRACTS**</u> |
|---------------------------------------|--------------------------------|
| Chairman                              | \$5,000,000                    |
| Chief Executive Officer & President * | \$5,000,000                    |
| Vice President, CFO *                 | \$3,000,000                    |
| Vice President, Operations            | -                              |
| Global VP, Sales & Mktg., Europe      | \$1,500,000                    |
| Vice Pres., Sec. & General Counsel    | -                              |
| VP, Human Resources                   | -                              |
| VP, Corporate Development             | -                              |
| VP, Finance                           | -                              |
| Director, Global Strategic Sourcing   | -                              |
| Supply Chain Manager - EAME           | -                              |
| M. Blouke Carus Fellow, VP Carus Tech | -                              |
| Plant Manager                         |                                |
| Business Development Director         | -                              |
| Director of Finance/IT                | -                              |
| Director of Sales                     | \$1,000,000                    |
| Global Product Manager                | \$ 500,000                     |
| Director of Marketing/EHSS            | -                              |
| Bid Channel Manager                   | \$ 200,000                     |

**NOTES:**

**\*ANY COMMITMENT FOR THE PURCHASE OR LEASE OF GOODS OR SERVICES IN EXCESS OF A 12-MONTH PERIOD MUST BE APPROVED BY THE CHIEF EXECUTIVE OFFICER & PRESIDENT OR CFO OF CARUS GROUP INC.**

**\*\*ANY CONTRACT OR BID THAT IS EFFECTIVE FOR LONGER THAN ONE YEAR, REGARDLESS OF REVENUE VOLUME, REQUIRES THE SIGNATURE OF THE CHIEF EXECUTIVE OFFICER & PRESIDENT OR CFO OF CARUS GROUP INC.**

**ANY CONTRACT OR BID THAT IS EFFECTIVE FOR MORE THAN ONE YEAR IS SUBJECT TO AN ANNUAL PRICE REVIEW, REGARDLESS OF ESCALATION CLAUSES.**

**\*\*\*THE APPROVALS AUTHORIZED HEREIN SHALL APPLY WITH EQUAL EFFECT TO ALL MEMBER COMPANIES OF CARUS GROUP INC., (i.e., CARUS CORPORATION, CARUS CHEMICAL COMPANY, CARUS EUROPE, CIRCLE TRANSPORT INC., ALEXANDER CHEMICAL CORPORATION).**

**SWORN AND NOTARIZED AFFIDAVIT OF COMPLIANCE**

**IRAN ECONOMIC SANCTIONS ACT**

**Michigan Public Act No. 517 of 2012**

All bidders must submit the following certification statement in compliance with Public Act No. 517 of 2012 (the "Iran Economic Sanctions Act") and attach this form to the bid. **The Lansing Board of Water & Light shall not accept any bid that does not include this sworn and notarized certification of statement.**

The undersigned, the owner or authorized officer of Alexander Chemical Corporation (the Bidder), pursuant to the compliance certification requirement provided in the Lansing Board of Water & Light Request for Proposal, hereby certifies, represents and warrants that the Bidder (including its officers, directors and employees) is not an "Iran linked business" within the meaning of the Iran Economic Sanctions Act, and that in the event the Bidder is awarded a contract as a result of the aforementioned Request for Proposal, the Bidder will not become an "Iran linked business" at any time during the course of performing the work or any services under the contract.

Specifically, the undersigned, owner or authorized officer of Alexander Chemical Corporation (the Bidder) attests it does not fall within the following definition of a "Iran linked business" under the Iran Economic Sanctions Act:

***MCL 129.312 (e) of the Act provides:***

*(e) "Iran linked business" means either of the following:*

- (i) A person [as defined below by MCL 129.312(f)] engaging in investment activities in the energy sector of Iran, including a person that provides oil or liquefied natural gas tankers or products used to construct or maintain pipelines used to transport oil or liquefied natural gas for the energy sector of Iran.*
- (ii) A financial institution that extends credit to another person, if that person will use the credit to engage in investment activities in the energy sector of Iran.*

***MCL 129.312(f) of the Act defines "Person" as follows:***

*(f) "Person" means any of the following:*

- (i) An individual, corporation, company, limited liability company, business association, partnership, society, trust, or any other nongovernmental entity, organization, or group.*
- (ii) Any governmental entity or instrumentality of a government, including a multilateral development institution, as defined in section 1701(c)(3) of the international financial institutional act, 22 USC 262r(c)(3).*

The Bidder further acknowledges that any person who is found to have submitted a false certification is responsible for a civil penalty of not more than \$250,000.00 or two (2) times the amount of the contract or proposed contract for which the false certification is made, whichever is greater, the cost of the Lansing Board of Water & Light's investigation, and reasonable attorney fees, in addition to the fine. Moreover, any person who submitted a false certification shall be ineligible to bid on a Request for Proposal for three (3) years from the date it is determined that the person has submitted the false certification.

BIDDER

Alexander Chemical Corporation

By:

*[Handwritten Signature]*

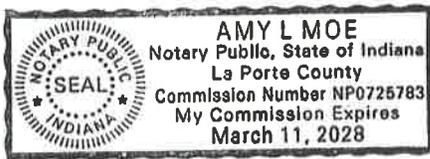
Its: President

Date: April 13, 2022

STATE OF INDIANA )

COUNTY OF LAPORTE )

This instrument was acknowledged before me on the 13th day of April, 2022, by Robert Davidson, President.



*[Handwritten Signature: Amy L. Moe]*

, Notary Public

LaPorte County, Indiana My

Commission Expires: March 11, 2028 Acting in the County of: LaPorte



The Public Health and Safety Organization

## NSF Product and Service Listings

These NSF Official Listings are current as of **Friday, April 08, 2022** 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?Company=17460&Standard=060&>

---

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

---

## Alexander Chemical Corporation

7593 South First Road  
Kingsbury Industrial Park  
Kingsbury, IN 46345  
United States  
800-348-8827  
219-393-5558

**Facility :** Kingsbury, IN

### Ammonia, Anhydrous

**Trade Designation**

Anhydrous Ammonia

**Product Function**

Chloramination

**Max Use**

5 mg/L

### Ammonium Hydroxide

**Trade Designation**

Ammonium Hydroxide

**Product Function**

Chloramination

**Max Use**

10 mg/L

### Chlorine[CL]

**Trade Designation**

Chlorine

**Product Function**

Disinfection & Oxidation

**Max Use**

30 mg/L

[CL] The residual levels of chlorine (hypochlorite ion and hypochlorous acid), chlorine dioxide, chlorate ion, chloramine and disinfection by-products shall be monitored in the finished drinking water to ensure compliance to all applicable regulations.

### Hydrofluosilicic Acid

| <b>Trade Designation</b>                      | <b>Product Function</b> | <b>Max Use</b> |
|---|-------------------------|----------------|
| Fluosilicic Acid - Water Treatment Grade      | Fluoridation            | 5 mg/L         |
| Hydrofluosilicic Acid - Water Treatment Grade | Fluoridation            | 5 mg/L         |

### Sodium Bisulfite[1]

| <b>Trade Designation</b>       | <b>Product Function</b> | <b>Max Use</b> |
|--------------------------------|-------------------------|----------------|
| Sodium Bisulfite Solution, 38% | Dechlorination          | 46mg/L         |

[1] This product contains sulfite.

Sulfites have been known to cause potentially lethal allergic reactions in sulfite-sensitive individuals.

The maximum recommended allowable residual sulfite level in the finished drinking water is 100 ppb (0.1 mg/L).

### Sodium Hydroxide

| <b>Trade Designation</b>                 | <b>Product Function</b>                    | <b>Max Use</b> |
|--|--|----------------|
| Caustic Soda-Liquid                      | Corrosion & Scale Control<br>pH Adjustment | 100 mg/L       |
| Sodium Hydroxide-Liquid (Diaphragm Cell) | Corrosion & Scale Control<br>pH Adjustment | 100 mg/L       |
| Sodium Hydroxide-Liquid (Membrane Cell)  | Corrosion & Scale Control<br>pH Adjustment | 100 mg/L       |

### Sodium Hypochlorite[HY]

| <b>Trade Designation</b>  | <b>Product Function</b>  | <b>Max Use</b> |
|---------------------------|--------------------------|----------------|
| 12.5% Sodium Hypochlorite | Disinfection & Oxidation | 84mg/L         |
| Liquid Bleach             | Disinfection & Oxidation | 84 mg/L        |
| Liquid Bleach 15%         | Disinfection & Oxidation | 67mg/L         |
| Sodium Hypochlorite 12.5% | Disinfection & Oxidation | 84 mg/L        |
| Sodium Hypochlorite 15%   | Disinfection & Oxidation | 67mg/L         |

[HY] The residual levels of chlorine (hypochlorite ion and hypochlorous acid), chlorine dioxide, chlorate ion, chloramine and disinfection by-products shall be monitored in the finished drinking water to ensure compliance to all applicable regulations. Also, reference the AWWA B300 (Hypochlorites) standard's Recommendations for the Handling and Storage of Hypochlorite Solutions appendix for information on preservation techniques for hypochlorite bleach in transit and storage.

**Sulfuric Acid**

***Trade Designation***

Sulfuric Acid

***Product Function***

Corrosion & Scale Control

***Max Use***

50 mg/L

---

Number of matching Manufacturers is 1

Number of matching Products is 15

Processing time was 0 seconds

**Chemical Properties:**

Chemical formula: NaOCl

Molecular weight: 74.44

Appearance: Bright yellow to yellow-green liquid

Odor: Chlorine odor

pH: 12.5 - 13.5

| <b>Solution Strength</b>             | <b>Available Chlorine by %Volume</b> | <b>Available Chlorine by % Weight</b> | <b>Specific Gravity @ 60°F</b> |
|--------------------------------------|--------------------------------------|---------------------------------------|--------------------------------|
|                                      | 14.5% – 15.5%                        | 12.08% - 12.79%                       | 1.200 – 1.212                  |
| <b>Excess Alkalinity (Typical) *</b> | <b>NaOH%</b>                         | <b>NaOH Grams/Liter</b>               |                                |
|                                      | 0.3% - 0.5%                          | 3.0gpl – 5.0gpl                       |                                |

\* Excess Alkalinity on finished product is customized to specific customer requirements.

**Physical Properties:**

Boiling Point, °F: > 212 @ 12.50 Weight % Available Chlorine

Freezing Point, °F: - 11 @ 12.50 % Weight % Available Chlorine

Solubility in Water: Complete

NSF International maximum use for 12.50 Weight% Available Chlorine: 84 milligrams per liter

**Manufactured by:**

Alexander Chemical Corporation

Kingsbury Industrial Park

Kingsbury, Indiana 46345

800/348-8827



Certified to  
NSF/ANSI 60

Maximum Usage  
Level: 84mg/L

### 1. Identification

|   |   |
|---|---|
| <b>Product identifier</b>                                     | <b>Sodium hypochlorite solution - sodium hypochlorite</b>                                       |
| <b>Other means of identification</b>                          | Not available.  |
| <b>Recommended use</b>  | Primarily used as a water treatment chemical as a disinfectant. Also used as a bleaching agent. |
| <b>Recommended restrictions</b>                               | None known.   |
| <b>Manufacturer/Importer/Supplier/Distributor information</b> |   |
| <b>Company name</b>   | Alexander Chemical Corporation  |
| <b>Telephone</b>  | 800-348-8827  |
| <b>Fax</b>  | 219-393-5364  |
| <b>E-mail</b>   | info@alexanderchemical.com  |
| <b>Website</b>  | www.alexanderchemical.com   |
| <b>Address</b>  | 7593 S. First Road,<br>Kingsbury Industrial Park, Kingsbury, Indiana 46345, USA                 |

|                                   |  |
|-----------------------------------|--|
| <b>Emergency telephone number</b> | All other non-emergency inquiries about the product should be directed to the company.<br>For Hazardous Materials [or Dangerous Goods] Incidents ONLY (spill, leak, fire, exposure or accident), call CHEMTREC at<br>CHEMTREC®, USA: 001 (800) 424-9300<br>CHEMTREC®, Mexico (Toll-Free - must be dialed from within country):<br>001-800-13-203-9987<br>CHEMTREC®, Other countries: 001 (703) 527-388 |
|-----------------------------------|--|

### 2. Hazard(s) identification

|                              |   |            |
|------------------------------|---|------------|
| <b>Physical hazards</b>      | Corrosive to metals   | Category 1 |
| <b>Health hazards</b>        | Skin corrosion/irritation   | Category 1 |
|                              | Serious eye damage/eye irritation   | Category 1 |
| <b>Environmental hazards</b> | Hazardous to the aquatic environment, acute hazard                                  | Category 1 |
| <b>OSHA defined hazards</b>  | Not classified.   |            |
| <b>Label elements</b>        |  |            |

|                                |   |
|--------------------------------|---|
| <b>Signal word</b>             | Danger  |
| <b>Hazard statement</b>        | May be corrosive to metals. Causes severe skin burns and eye damage. Toxic to aquatic life.   |
| <b>Precautionary statement</b> |   |
| <b>Prevention</b>              | Keep only in original container. Do not breathe mist or vapor. Wash thoroughly after handling. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. |

|  |  |
|--|--|
| <b>Response</b>                                  | If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. Wash contaminated clothing before reuse. Absorb spillage to prevent material damage. |
| <b>Storage</b>                                   | Store locked up. Store in corrosive resistant container with a resistant inner liner.  |
| <b>Disposal</b>                                  | Dispose of contents/container in accordance with local/regional/national/international regulations.  |
| <b>Hazard(s) not otherwise classified (HNOC)</b> | None known.  |

### 3. Composition/information on ingredients

#### Mixtures

| Chemical name       | CAS number | %       |
|---------------------|------------|---------|
| Sodium hypochlorite | 7681-52-9  | 5-20    |
| Sodium hydroxide    | 1310-73-2  | 1-5     |
| Water               | 7732-18-5  | Balance |

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

### 4. First-aid measures

|   |  |
|---|--|
| <b>Inhalation</b>   | Move to fresh air. Call a physician if symptoms develop or persist.  |
| <b>Skin contact</b>   | Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.   |
| <b>Eye contact</b>  | Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.  |
| <b>Ingestion</b>  | Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.  |
| <b>Most important symptoms/effects, acute and delayed</b>                     | Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.  |
| <b>Indication of immediate medical attention and special treatment needed</b> | Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed. |
| <b>General information</b>  | Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.   |

### 5. Fire-fighting measures

|  |   |
|--|---|
| <b>Suitable extinguishing media</b>                                  | Water fog. Foam. Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ).                      |
| <b>Unsuitable extinguishing media</b>                                | Do not use water jet as an extinguisher, as this will spread the fire.                        |
| <b>Specific hazards arising from the chemical</b>                    | During fire, gases hazardous to health may be formed.   |
| <b>Special protective equipment and precautions for firefighters</b> | Self-contained breathing apparatus and full protective clothing must be worn in case of fire. |
| <b>Fire-fighting equipment/instructions</b>                          | Move containers from fire area if you can do so without risk.                                 |
| <b>Specific methods</b>  | Use standard firefighting procedures and consider the hazards of other involved materials.    |

### 6. Accidental release measures

|  |   |
|--|---|
| <b>Personal precautions, protective equipment and emergency procedures</b> | Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS. |
|--|---|

**Methods and materials for containment and cleaning up**

This product is miscible in water.

Large Spills: Stop the flow of material, if this is without risk. Use water spray to reduce vapors or divert vapor cloud drift. Dike the spilled material, where this is possible. Absorb spillage to prevent material damage. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

**Environmental precautions**

Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

**7. Handling and storage**

**Precautions for safe handling**

Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Provide adequate ventilation. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

**Conditions for safe storage, including any incompatibilities**

Store locked up. Store in corrosive resistant container with a resistant inner liner. Keep only in the original container. Store away from incompatible materials (see Section 10 of the SDS).

**8. Exposure controls/personal protection**

**Occupational exposure limits**

**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

| Components                       | Type | Value   |
|----------------------------------|------|---------|
| Sodium hydroxide (CAS 1310-73-2) | PEL  | 2 mg/m3 |

**US. ACGIH Threshold Limit Values**

| Components                       | Type    | Value   |
|----------------------------------|---------|---------|
| Sodium hydroxide (CAS 1310-73-2) | Ceiling | 2 mg/m3 |

**US. NIOSH: Pocket Guide to Chemical Hazards**

| Components                       | Type    | Value   |
|----------------------------------|---------|---------|
| Sodium hydroxide (CAS 1310-73-2) | Ceiling | 2 mg/m3 |

**US. Workplace Environmental Exposure Level (WEEL) Guides**

| Components                          | Type | Value   |
|-------------------------------------|------|---------|
| Sodium hypochlorite (CAS 7681-52-9) | STEL | 2 mg/m3 |

**Biological limit values**

No biological exposure limits noted for the ingredient(s).

**Appropriate engineering controls**

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection**

Wear safety glasses with side shields (or goggles) and a face shield.

**Skin protection**

**Hand protection**

Wear appropriate chemical resistant gloves. Be aware that the liquid may penetrate the gloves. Frequent change is advisable. Nitrile or neoprene gloves are recommended.

**Other**

Wear appropriate chemical resistant clothing.

**Respiratory protection**

In case of insufficient ventilation, wear suitable respiratory equipment.

**Thermal hazards**

Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations**

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical and chemical properties

### Appearance

|   |                         |
|---|-------------------------|
| Physical state                          | Liquid.                 |
| Form                                    | Greenish yellow liquid. |
| Color                                   | Light greenish yellow.  |
| Odor                                    | Chlorine.               |
| Odor threshold                          | Not available.          |
| pH                                      | 11.5 ±0.3               |
| Melting point/freezing point            | -11 °F (-23.9 °C)       |
| Initial boiling point and boiling range | > 212 °F (> 100 °C)     |
| Flash point                             | Not available.          |
| Evaporation rate                        | Not available.          |
| Flammability (solid, gas)               | Not available.          |

### Upper/lower flammability or explosive limits

|                                |                |
|--------------------------------|----------------|
| Flammability limit - lower (%) | Not available. |
| Flammability limit - upper (%) | Not available. |
| Explosive limit - lower (%)    | Not available. |
| Explosive limit - upper (%)    | Not available. |

Vapor pressure Not available.

Vapor density Not available.

Relative density 1.09 -1.21

### Solubility(ies)

Solubility (water) Completely soluble in water.

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Viscosity Not available.

## 10. Stability and reactivity

Reactivity May be corrosive to metals.

Chemical stability Material is stable under normal conditions.

Possibility of hazardous reactions No dangerous reaction known under conditions of normal use.

Conditions to avoid Contact with incompatible materials.

Incompatible materials Acids. Metals. Strong oxidizing agents.

Hazardous decomposition products No hazardous decomposition products are known. Contact with acids liberates toxic gas.

## 11. Toxicological information

### Information on likely routes of exposure

Ingestion Causes digestive tract burns.

Inhalation May cause irritation to the respiratory system. Prolonged inhalation may be harmful.

Skin contact Causes severe skin burns.

Eye contact Causes serious eye damage.

Symptoms related to the physical, chemical and toxicological characteristics Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

### Information on toxicological effects

**Acute toxicity**

| Components                          | Species                                  | Test Results             |
|-------------------------------------|--|--------------------------|
| Sodium hydroxide (CAS 1310-73-2)    |  |                          |
| <b>Acute</b>                        |  |                          |
| <i>Dermal</i>                       |  |                          |
| LC50                                | Rabbit                                   | 1350 mg/kg, (Calculated) |
| <i>Oral</i>                         |  |                          |
| LDLo                                | Rabbit                                   | 500 mg/kg, (Calculated)  |
| Sodium hypochlorite (CAS 7681-52-9) |  |                          |
| <b>Acute</b>                        | Rat                                      |                          |
| <i>Oral</i>                         | Causes severe skin burns and eye damage. | 8.91 g/kg                |
| LD50                                | Causes serious eye damage.               |                          |

**Skin corrosion/irritation****Serious eye damage/eye irritation****Respiratory or skin sensitization****Respiratory sensitization** Not classified.**Skin sensitization** This product is not expected to cause skin sensitization.**Germ cell mutagenicity** No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.**Carcinogenicity** This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.**IARC Monographs. Overall Evaluation of Carcinogenicity**

Sodium hypochlorite (CAS 7681-52-9) 3 Not classifiable as to carcinogenicity to humans.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed.

**Reproductive toxicity** This product is not expected to cause reproductive or developmental effects.**Specific target organ toxicity - single exposure** Not classified.**Specific target organ toxicity - repeated exposure** Not classified.**Aspiration hazard** Not classified.**Chronic effects** Prolonged inhalation may be harmful.**12. Ecological information****Ecotoxicity**

| Components                       | Species | Test Results  |
|----------------------------------|---------|---|
| Sodium hydroxide (CAS 1310-73-2) |         |   |
| <b>Aquatic</b>                   |         |   |
| Crustacea                        | EC50    |   |
| Fish                             | LC50    | Western mosquitofish ( <i>Gambusia affinis</i> ) 125 mg/l, 96 hours   |
|                                  |         | Water flea ( <i>Ceriodaphnia dubia</i> ) 34.59 - 47.13 mg/l, 48 hours |

| Components                           | Species   | Test Results  |
|--------------------------------------|---|---|
| Sodium hypochlorite (CAS 7681-52-9)  |   |   |
| <b>Aquatic</b>                       |   |   |
| Fish                                 | LC50  | Rainbow trout,donaldson trout (Oncorhynchus mykiss) |
|                                      |   | 0.03 - 0.07 mg/l, 96 hours                          |
| <b>Persistence and degradability</b> | No data is available on the degradability of this product.  |   |
| <b>Bioaccumulative potential</b>     | No data available.  |   |
| <b>Mobility in soil</b>              | No data available.  |   |
| <b>Other adverse effects</b>         | No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component. |   |

### 13. Disposal considerations

|  |  |
|--|--|
| <b>Disposal instructions</b>                 | Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations. |
| <b>Local disposal regulations</b>            | Dispose in accordance with all applicable regulations.   |
| <b>Hazardous waste code</b>                  | D002: Waste Corrosive material [pH <=2 or =>12.5, or corrosive to steel]<br>The waste code should be assigned in discussion between the user, the producer and the waste disposal company.   |
| <b>Waste from residues / unused products</b> | Dispose of in accordance with local regulations.   |
| <b>Contaminated packaging</b>                | Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.   |

### 14. Transport information

#### DOT

|                                     |   |
|-------------------------------------|---|
| <b>UN number</b>                    | UN1791  |
| <b>UN proper shipping name</b>      | Hypochlorite solutions  |
| <b>Transport hazard class(es)</b>   |   |
| <b>Class</b>                        | 8   |
| <b>Subsidiary risk</b>              | -   |
| <b>Label(s)</b>                     | 8   |
| <b>Packing group</b>                | II  |
| <b>Environmental hazards</b>        |   |
| <b>Marine pollutant</b>             | Yes   |
| <b>Special precautions for user</b> | Read safety instructions, SDS and emergency procedures before handling. |
| <b>Special provisions</b>           | A7, B2, B15, IB2, IP5, N34, T7, TP2, TP24                               |
| <b>Packaging exceptions</b>         | 154   |
| <b>Packaging non bulk</b>           | 202   |
| <b>Packaging bulk</b>               | 242   |

#### IATA

|                                     |   |
|-------------------------------------|---|
| <b>UN number</b>                    | UN1791  |
| <b>UN proper shipping name</b>      | Hypochlorite solution   |
| <b>Transport hazard class(es)</b>   |   |
| <b>Class</b>                        | 8   |
| <b>Subsidiary risk</b>              | -   |
| <b>Packing group</b>                | II  |
| <b>Environmental hazards</b>        | Yes   |
| <b>ERG Code</b>                     | 8L  |
| <b>Special precautions for user</b> | Read safety instructions, SDS and emergency procedures before handling. |

#### IMDG

|                                |                       |
|--------------------------------|-----------------------|
| <b>UN number</b>               | UN1791                |
| <b>UN proper shipping name</b> | HYPOCHLORITE SOLUTION |

|   |  |
|---|--|
| <b>Transport hazard class(es)</b>   |  |
| <b>Class</b>  | 8  |
| <b>Subsidiary risk</b>  | -  |
| <b>Label(s)</b>   | 8  |
| <b>Packing group</b>  | II   |
| <b>Environmental hazards</b>  |  |
| <b>Marine pollutant</b>   | Yes  |
| <b>EmS</b>  | F-A, S-B   |
| <b>Special precautions for user</b>   | Read safety instructions, SDS and emergency procedures before handling.  |
| <b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b> | This product is a liquid and when transported in bulk is covered under MARPOL 73/78 Annex II. This product is listed in the IBC Code.<br>Ship type: 2<br>Pollution category: Y |

## 15. Regulatory information

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.  
All components are on the U.S. EPA TSCA Inventory List.

### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

### CERCLA Hazardous Substance List (40 CFR 302.4)

|                                     |        |
|-------------------------------------|--------|
| Sodium hydroxide (CAS 1310-73-2)    | LISTED |
| Sodium hypochlorite (CAS 7681-52-9) | LISTED |

### Superfund Amendments and Reauthorization Act of 1986 (SARA)

**Hazard categories** Immediate Hazard - Yes  
Delayed Hazard - Yes  
Fire Hazard - No  
Pressure Hazard - No  
Reactivity Hazard - No

### SARA 302 Extremely hazardous substance

Not listed.

**SARA 311/312 Hazardous chemical** Yes

**SARA 313 (TRI reporting)**  
Not regulated.

### Other federal regulations

#### Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

#### Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.

### US state regulations

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

DANGER  
Keep out of reach of children. Hazardous to Humans and domestic animals.  
Corrosive, causes severe skin and eye irritation or chemical burns to broken skin.  
Causes eye damage.  
This pesticide is toxic to fish and aquatic organisms.  
Strong oxidizing agent.

### US. Massachusetts RTK - Substance List

Sodium hydroxide (CAS 1310-73-2)

Sodium hypochlorite (CAS 7681-52-9)

**US. New Jersey Worker and Community Right-to-Know Act**

Sodium hydroxide (CAS 1310-73-2)

Sodium hypochlorite (CAS 7681-52-9)

**US. Pennsylvania Worker and Community Right-to-Know Law**

Sodium hydroxide (CAS 1310-73-2)

Sodium hypochlorite (CAS 7681-52-9)

**US. Rhode Island RTK**

Sodium hydroxide (CAS 1310-73-2)

Sodium hypochlorite (CAS 7681-52-9)

**US. California Proposition 65**

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

**US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance**

Not listed.

**International Inventories**

| Country(s) or region        | Inventory name                                | On inventory (yes/no)* |
|-----------------------------|---|------------------------|
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | Yes                    |

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

**16. Other information, including date of preparation or last revision**

|               |                 |
|---------------|-----------------|
| Issue date    | 30-July-2014    |
| Revision date | 26-January-2021 |
| Version #     | 04              |
| NFPA ratings  |                 |



**Disclaimer**

The information contained herein is accurate to the best of our knowledge. However, data, safety standards and government regulations are subject to change and, therefore, holders and users should satisfy themselves that they are aware of all current data and regulations relevant to their particular use of product. ALEXANDER CHEMICAL CORPORATION DISCLAIMS ALL LIABILITY FOR RELIANCE ON THE COMPLETENESS OR ACCURACY OR THE INFORMATION INCLUDED HEREIN. CARUS CORPORATION MAKES NO WARRANTY, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR PARTICULAR USE OR PURPOSE OF THE PRODUCT DESCRIBED HEREIN. All conditions relating to storage, handling, and use of the product are beyond the control of Alexander Chemical Corporation, and shall be the sole responsibility of the holder or user of the product.

**Chemical Properties:**

|                            |                                 |
|----------------------------|---------------------------------|
| CAS#:                      | 16961-83-4                      |
| Chemical formula:          | H <sub>2</sub> SiF <sub>6</sub> |
| Molecular weight:          | 144.06                          |
| Hydrofluosilicic acid, %:  | 23.00 - 25.00                   |
| Hydrofluoric acid (HF), %: | 1 Maximum                       |
| Heavy metals as lead, ppm: | 200.00 maximum                  |
| Color:                     | 25 APHA maximum                 |

**Physical Properties:**

|                                 |                       |
|---------------------------------|-----------------------|
| Boiling point, °F:              | 225.00                |
| Freezing point, °F:             | - 4.00                |
| Specific gravity @ 60 °F:       | 1.223 @ 25.00 %       |
| Vapor pressure, mm Hg @ 167 °F: | 218                   |
| pH:                             | 1.2                   |
| Appearance:                     | White to Straw Yellow |
| Odor:                           | Sour, pungent         |
| Solubility in water:            | Complete              |

NSF International maximum use: 5.00 milligrams per liter

**Packaged by:**

Alexander Chemical Corporation  
7593 South First Road  
La Porte, Indiana 46350  
800-348-8827

### 1. Identification

|                                      |   |
|--------------------------------------|---|
| <b>Product identifier</b>            | <b>Hydrofluosilicic acid</b>  |
| <b>Other means of identification</b> |   |
| <b>Synonyms</b>                      | Fluorosilicic acid, Hydrofluorosilicic acid                           |
| <b>Recommended use</b>               | Hydrofluosilicic acid is an acid used in water treatment application. |
| <b>Recommended restrictions</b>      | None known.   |

### Manufacturer/Importer/Supplier/Distributor information

|                       |   |
|-----------------------|---|
| <b>Company name</b>   | Alexander Chemical Corporation                        |
| <b>Address</b>        | 7593 S. First Road,<br>Kingsbury Industrial Park, USA |
| <b>Fax</b>            | 219-393-5364  |
| <b>Website</b>        | www.alexanderchemical.com                             |
| <b>Contact Person</b> | Keith Bonner  |

**Telephone** (800) 348-8827 - non-emergency inquiries only

### Emergency telephone number

For Hazardous Materials [or Dangerous Goods] Incidents ONLY

(spill, leak, fire, exposure or accident), call CHEMTREC at  
CHEMTREC®, USA: 001 (800) 424-9300  
CHEMTREC®, Mexico (Toll-Free - must be dialed from within country):  
001-800-13-203-9987  
CHEMTREC®, Other countries: 001 (703) 527-388

### 2. Hazard(s) identification

|                         |                                   |             |
|-------------------------|-----------------------------------|-------------|
| <b>Physical hazards</b> | Acute toxicity, oral              | Category 4  |
| <b>Health hazards</b>   | Skin corrosion/irritation         | Category 1B |
|                         | Serious eye damage/eye irritation | Category 1  |
|                         | Not classified.                   |             |

### OSHA defined hazards

#### Label elements



|                                |   |
|--------------------------------|---|
| <b>Signal word</b>             | Danger  |
| <b>Hazard statement</b>        | Harmful if swallowed. Causes severe skin burns and eye damage.  |
| <b>Precautionary statement</b> |   |
| <b>Prevention</b>              | Do not breathe mist. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling. |

|  |  |
|--|--|
| <b>Response</b>                                  | If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. |
| <b>Storage</b>                                   | Store locked up.   |
| <b>Disposal</b>                                  | Dispose of contents/container in accordance with local/regional/national/international regulations.  |
| <b>Hazard(s) not otherwise classified (HNOC)</b> | None known.  |

### 3. Composition/information on ingredients

#### Substances

| Chemical name           | Common name and synonyms | CAS number | %  |
|-------------------------|--------------------------|------------|----|
| Hydrofluorosilicic acid |                          | 16961-83-4 | 24 |

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

### 4. First-aid measures

|   |   |
|---|---|
| <b>Inhalation</b>   | Move injured person into fresh air and keep person calm under observation. Get medical attention if symptoms occur.   |
| <b>Skin contact</b>   | Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Chemical burns must be treated by a physician.  |
| <b>Eye contact</b>  | Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Hold eyelids apart. Continue rinsing. Get medical attention immediately.   |
| <b>Ingestion</b>  | Rinse mouth thoroughly with water and give large amounts of milk or water to people not unconscious. Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit doesn't enter the lungs. Obtain medical attention and take along these instructions. |
| <b>Most important symptoms/effects, acute and delayed</b>                     | Corrosive. Prolonged contact causes serious eye and tissue damage. May cause burns in mucous membranes, throat, esophagus and stomach. May cause lung edema. Symptoms may be delayed.   |
| <b>Indication of immediate medical attention and special treatment needed</b> | In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.  |
| <b>General information</b>  | Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.   |

### 5. Fire-fighting measures

|  |   |
|--|---|
| <b>Suitable extinguishing media</b>                                  | Use fire-extinguishing media appropriate for surrounding materials.   |
| <b>Unsuitable extinguishing media</b>                                | Do not use water jet as an extinguisher, as this will spread the fire.  |
| <b>Specific hazards arising from the chemical</b>                    | Fire may produce irritating, corrosive and/or toxic gases.  |
| <b>Special protective equipment and precautions for firefighters</b> | Firefighters should wear full protective clothing including self contained breathing apparatus. Structural firefighters protective clothing will only provide limited protection.   |
| <b>Fire-fighting equipment/instructions</b>                          | Use standard firefighting procedures and consider the hazards of other involved materials. Use water spray to cool unopened containers. Cool containers with flooding quantities of water until well after fire is out. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply. |

### 6. Accidental release measures

|  |  |
|--|--|
| <b>Personal precautions, protective equipment and emergency procedures</b> | Keep unnecessary personnel away. Local authorities should be advised if significant spillages cannot be contained. Stay upwind. Keep out of low areas. Ensure adequate ventilation. Avoid contact with eyes, skin, and clothing. Avoid breathing mist or vapor. Use personal protection recommended in Section 8 of the SDS. |
|--|--|

**Methods and materials for containment and cleaning up**

Should not be released into the environment.

Large Spills: Dike far ahead of liquid spill for later disposal. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal.

Small Spills: Absorb spill with vermiculite or other inert material. Clean contaminated surface thoroughly. After removal flush contaminated area thoroughly with water.

Never return spills in original containers for re-use.

**Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not contaminate water.

**7. Handling and storage****Precautions for safe handling**

Handle and open container with care. Use only with adequate ventilation. Avoid contact with skin, eyes and clothing. Avoid breathing mist or vapor. Wash thoroughly after handling. Observe good industrial hygiene practices.

**Conditions for safe storage, including any incompatibilities**

Keep in a well-ventilated place. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep this material away from food, drink and animal feed. Use care in handling/storage. Transfer and storage systems should be compatible and corrosion resistant.

**8. Exposure controls/personal protection****Occupational exposure limits****US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

| Components                               | Type | Value     |
|--|------|-----------|
| Hydrofluorosilicic acid (CAS 16961-83-4) | PEL  | 2.5 mg/m3 |

**US. OSHA Table Z-2 (29 CFR 1910.1000)**

| Components                               | Type | Value     | Form  |
|--|------|-----------|-------|
| Hydrofluorosilicic acid (CAS 16961-83-4) | TWA  | 2.5 mg/m3 | Dust. |

**US. ACGIH Threshold Limit Values**

| Components                               | Type | Value     |
|--|------|-----------|
| Hydrofluorosilicic acid (CAS 16961-83-4) | TWA  | 2.5 mg/m3 |

**US. NIOSH: Pocket Guide to Chemical Hazards**

| Components                               | Type | Value     |
|--|------|-----------|
| Hydrofluorosilicic acid (CAS 16961-83-4) | TWA  | 2.5 mg/m3 |

**Biological limit values****ACGIH Biological Exposure Indices**

| Components                               | Value  | Determinant | Specimen | Sampling Time |
|--|--------|-------------|----------|---------------|
| Hydrofluorosilicic acid (CAS 16961-83-4) | 3 mg/l | Fluoride    | Urine    | *             |
|  | 2 mg/l | Fluoride    | Urine    | *             |

\* - For sampling details, please see the source document.

**Appropriate engineering controls**

Provide adequate ventilation. Observe Occupational Exposure Limits and minimize the risk of inhalation of vapors. Eye wash facilities and emergency shower must be available when handling this product.

**Individual protection measures, such as personal protective equipment****Eye/face protection**

Wear approved safety glasses or goggles.

**Skin protection****Hand protection**

Wear protective gloves. Be aware that the liquid may penetrate the gloves. Frequent change is advisable. Suitable gloves can be recommended by the glove supplier.

**Other**

Wear appropriate chemical resistant clothing. Protective shoes or boots. Structural firefighters protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations. Wear chemical protective equipment that is specifically recommended by the Personal Protective Equipment manufacturer.

**Respiratory protection** If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. In case of inadequate ventilation or risk of inhalation of mist, use suitable respiratory equipment with particle filter. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA 29 CFR 1910.134 and ANSI Z88.2.

**Thermal hazards** Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations** When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product. Remove and isolate contaminated clothing and shoes. Handle in accordance with good industrial hygiene and safety practice. Launder contaminated clothing before reuse.

## 9. Physical and chemical properties

**Appearance** White to straw yellow solution.

**Physical state** Liquid.

**Form** Liquid.

**Color** White to straw yellow.

**Odor** Pungent, sour penetrating odor.

**Odor threshold** Not available.

**pH** 1.2

**Melting point/freezing point** -4 °F (-20 °C)

**Initial boiling point and boiling range** 225 °F (107.22 °C)

**Flash point** Not available.

**Evaporation rate** Not available.

**Flammability (solid, gas)** Not applicable.

**Upper/lower flammability or explosive limits**

**Flammability limit - lower (%)** Not available.

**Flammability limit - upper (%)** Not available.

**Vapor pressure** 218 mm Hg (100 °F / 38 °C)

**Vapor density** Not available.

**Relative density** 1.22 ± 0.03

**Relative density temperature** 77 °F (25 °C)

**Solubility(ies)**

**Solubility (water)** Completely soluble in water.

**Partition coefficient (n-octanol/water)** No data available.

**Auto-ignition temperature** Not available.

**Decomposition temperature** Not available.

**Viscosity** Not available.

**Other information**

**VOC (Weight %)** Not available

## 10. Stability and reactivity

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

**Chemical stability** Stable at normal conditions.

**Possibility of hazardous reactions** Contact with metals may evolve flammable hydrogen gas.

**Conditions to avoid** Keep away from water, steam or other incompatible materials.

**Incompatible materials** Glass. Stoneware. Metals. Bases.

**Hazardous decomposition products** Hydrogen fluoride. Silicon tetrafluoride. Hydrogen gas.

## 11. Toxicological information

### Information on likely routes of exposure

|                     |   |
|---------------------|---|
| <b>Ingestion</b>    | Harmful if swallowed. Causes digestive tract burns.   |
| <b>Inhalation</b>   | Causes respiratory tract burns. May cause lung edema. |
| <b>Skin contact</b> | Causes severe skin burns.                             |
| <b>Eye contact</b>  | Causes severe eye burns.                              |

**Symptoms related to the physical, chemical and toxicological characteristics** Corrosive. Prolonged contact causes serious eye and tissue damage. May cause burns in mucous membranes, throat, esophagus and stomach. May cause lung edema. Symptoms may be delayed.

### Information on toxicological effects

**Acute toxicity** Harmful if swallowed.

| Components | Species | Test Results |
|------------|---------|--------------|
|------------|---------|--------------|

Hydrofluorosilicic acid (CAS 16961-83-4)

#### Acute

*Oral*

|      |     |           |
|------|-----|-----------|
| LD50 | Rat | 430 mg/kg |
|------|-----|-----------|

**Skin corrosion/irritation** Causes severe skin burns.

**Serious eye damage/eye irritation** Causes severe eye damage.

### Respiratory or skin sensitization

**Respiratory sensitization** No data available.

**Skin sensitization** No data available.

**Germ cell mutagenicity** No data available.

**Carcinogenicity** No data available.

### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

**Reproductive toxicity** No data available.

**Specific target organ toxicity - single exposure** No data available.

**Specific target organ toxicity - repeated exposure** No data available.

**Aspiration hazard** No data available.

**Chronic effects** Prolonged overexposure to fluorides may increase fluoride content of bones and teeth, and may result in fluorosis, with mottling of teeth (in children) and brittleness of bones. Absorbed fluoride can cause metabolic imbalances with irregular heartbeat, nausea, dizziness, vomiting and seizures. Risk of hypocalcemia with nervous problems (tetany) and cardiac arrhythmia.

## 12. Ecological information

**Ecotoxicity** The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

**Persistence and degradability** No data available.

**Bioaccumulative potential** No data available.

**Mobility in soil** The product is water soluble and may spread in water systems.

**Other adverse effects** The product may affect the acidity (pH-factor) in water with risk of harmful effects to aquatic organisms.

## 13. Disposal considerations

**Disposal instructions** Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Dispose of contents/container in accordance with local/regional/national/international regulations. Dispose in accordance with all applicable regulations.

**Hazardous waste code** D002: Waste Corrosive material [pH <=2 or >=12.5, or corrosive to steel]  
Waste codes should be assigned by the user based on the application for which the product was used.

**Waste from residues / unused products** Dispose of in accordance with local regulations.

**Contaminated packaging** Dispose of in accordance with local regulations. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

## 14. Transport information

### DOT

**UN number** UN1778  
**UN proper shipping name** Fluorosilicic acid  
**Transport hazard class(es)**  
**Class** 8  
**Subsidiary risk** -  
**Label(s)** 8  
**Packing group** II  
**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.  
**Special provisions** A6, A7, B2, B15, IB2, N3, N34, T8, TP2, TP12  
**Packaging exceptions** None  
**Packaging non bulk** 202  
**Packaging bulk** 242

### DOT BULK

#### BULK

**UN number** UN1778  
**UN proper shipping name** Fluorosilicic acid  
**Transport hazard class(es)**  
**Class** 8  
**Label(s)** 8  
**Packing group** II  
**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.  
**Special provisions** A6, A7, B2, B15, IB2, N3, N34, T8, TP2, TP12  
**Packaging exceptions** None  
**Packaging non bulk** 202  
**Packaging bulk** 242

### IATA

**UN number** UN1778  
**UN proper shipping name** Fluorosilicic acid  
**Transport hazard class(es)**  
**Class** 8  
**Subsidiary risk** -  
**Label(s) Packing** 8  
**group Environmental** II  
**hazards ERG Code** No.  
8L  
**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

### IMDG

**UN number** UN1778  
**UN proper shipping name** FLUOROSILICIC ACID  
**Transport hazard class(es)**  
**Class** 8  
**Subsidiary risk** -  
**Label(s) Packing** 8  
**group Environmental** II  
**hazards**  
**Marine pollutant** No.  
**EmS** F-A, S-B  
**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.  
**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** This product is a liquid and when transported in bulk is covered under MARPOL 73/78 Annex II. This product is listed in the IBC Code.  
Ship type: 3  
Pollution category: Y

## 15. Regulatory information

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Not listed.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories** Immediate Hazard - Yes  
Delayed Hazard - No  
Fire Hazard - No  
Pressure Hazard - No  
Reactivity Hazard - Yes

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical** Yes

**SARA 313 (TRI reporting)**

Not regulated.

**Other federal regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.

**US state regulations** This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

**US. Massachusetts RTK - Substance List**

Hydrofluorosilicic acid (CAS 16961-83-4)

**US. New Jersey Worker and Community Right-to-Know Act**

Hydrofluorosilicic acid (CAS 16961-83-4)

**US. Pennsylvania Worker and Community Right-to-Know Law**

Hydrofluorosilicic acid (CAS 16961-83-4)

**US. Rhode Island RTK**

Not regulated.

**US. California Proposition 65**

**US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance**

Not listed.

**International Inventories**

| Country(s) or region        | Inventory name                                | On inventory (yes/no)* |
|-----------------------------|---|------------------------|
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | Yes                    |

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other information, including date of preparation or last revision

**Issue date** 25-July-2014  
**Revision date** Revision date: 5/20/20  
**Version #** 01

**NFPA ratings****References**

Registry of Toxic Effects of Chemical Substances (RTECS)  
GESTIS Substance Database  
US. IARC Monographs on Occupational Exposures to Chemical Agents

**Disclaimer**

The information contained herein is accurate to the best of our knowledge. However, data, safety standards and government regulations are subject to change and, therefore, holders and users should satisfy themselves that they are aware of all current data and regulations relevant to their particular use of product. ALEXANDER CHEMICAL CORPORATION DISCLAIMS ALL LIABILITY FOR RELIANCE ON THE COMPLETENESS OR ACCURACY OR THE INFORMATION INCLUDED HEREIN. ALEXANDER CHEMICAL CORPORATION MAKES NO WARRANTY, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR PARTICULAR USE OR PURPOSE OF THE PRODUCT DESCRIBED HEREIN. All conditions relating to storage, handling, and use of the product are beyond the control of Alexander Chemical Corporation, and shall be the sole responsibility of the holder or user of the product.