

CITY OF ANN ARBOR  
INVITATION TO BID



**Sodium Hydroxide (NaOH)**

**ITB No. 4538**

**Due Date: April 26, 2018 at 2:00 PM (Local Time)**

Water Treatment Plant

Issued By:

City of Ann Arbor  
Procurement Unit  
301 E. Huron Street  
Ann Arbor, MI 48104

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### **ATTACHMENTS**

*City of Ann Arbor Standard Purchase Order Terms and Conditions*

*City of Ann Arbor Vendor Conflict of Interest Disclosure Form*

*City of Ann Arbor Non-Discrimination Ordinance Declaration Form and Notice*

## **INSTRUCTIONS TO BIDDERS**

### **General**

The City of Ann Arbor's Procurement Office is soliciting bids for the purchase of Sodium Hydroxide (NaOH) based on the specifications provided herein.

The pricing provided for this ITB shall be firm for one (1) year. The contract term is to start approximately July 1, 2018 and continue through June 30, 2019 (twelve-month period). The City reserves the right to renew the contract with the selected Bidder for up to three (3) one-year periods provided that by sixty (60) days prior to the end of the original contract term or renewal term (as applicable) written notice of the City's exercise of its extension rights is provided to the Vendor. Extension to be under the same terms and conditions.

Any Bid which does not conform fully to these instructions may be rejected.

### **Site Inspection**

Prior to Monday, April 16, 2018, a bidder may inspect the City's site and equipment. Inspections are by appointment only during business hours (8:00 a.m. to 3:00 p.m.). Appointments can be scheduled by email to Sarah Page, Drinking Water Quality Manager, Water Treatment Unit at [SPage@a2gov.org](mailto:SPage@a2gov.org). No appointments will be scheduled after April 16, 2018.

### **Preparation of Bids**

Bids should be prepared providing a straight-forward, concise description of the Bidder's ability to meet the requirements of the ITB. Bids shall be written in ink or typewritten. No erasures are permitted. Mistakes may be crossed out and corrected and must be initialed and dated in ink by the person signing the Bid.

Bids must be submitted on the "Bid Forms" provided with each blank properly filled in. If forms are not fully completed it may disqualify the bid. No alternative bid will be considered unless alternative bids are specifically requested. If alternatives are requested, any deviation from the specification must be fully described, in detail on a clearly marked "Alternate" section of Bid form.

Each person signing the Bid certifies that he/she is the person in the Bidder's firm/organization responsible for the decision as to the fees being offered in the Bid and has not and will not participated in any action contrary to the terms of this provision.

### **Questions or Clarifications / Designated City Contacts**

All questions regarding this ITB shall be submitted via email. Emailed questions and inquiries will be accepted from any and all prospective Bidders in accordance with the terms and conditions of the ITB.

All questions shall be due on or before April 17, 2018 at 2:00 p.m. and should be addressed as follows:

Specification/Scope of Work questions emailed to Sarah Page, Drinking Water Quality Manager, Water Treatment Services Unit at [SPage@a2gov.org](mailto:SPage@a2gov.org).

Bid Process and Compliance questions emailed to Colin Spencer, [CSpencer@a2gov.org](mailto:CSpencer@a2gov.org)

Any error, omissions or discrepancies in the specification discovered by a prospective contractor and/or service provider shall be brought to the attention of Colin Spencer at [cspencer@a2gov.org](mailto:cspencer@a2gov.org) after discovery as possible. Further, the contractor and/or service provider shall not be allowed to take advantage of errors, omissions or discrepancies in the specifications.

## Addenda

If it becomes necessary to revise any part of the ITB, notice of the Addendum will be posted to Michigan Inter-governmental Trade Network (MITN) [www.mitn.info](http://www.mitn.info) and/or City of Ann Arbor web site [www.A2gov.org](http://www.A2gov.org) for all parties to download.

Each Bidder must in its Bid, to avoid any miscommunications, acknowledge all addenda which it has received, but the failure of a Bidder to receive, or acknowledge receipt of; any addenda shall not relieve the Bidder of the responsibility for complying with the terms thereof.

The City will not be bound by oral responses to inquiries or written responses other than written addenda.

## Bid Submission

All Bids are due and must be delivered to the City of Ann Arbor Procurement Unit on or before **April 26, 2018 at 2:00 p.m. (Local time)**. Bids submitted late or via oral, telephonic, telegraphic, electronic mail or facsimile **will not** be considered or accepted.

**Each Bidder must submit one (1) original Bid and one (1) Bid copy in a sealed envelope clearly marked: ITB No. 4538 – Sodium Hydroxide (NaOH)**

**Bids must be addressed and delivered to:**

City of Ann Arbor  
Procurement Unit,  
c/o Customer Services, 1<sup>st</sup> Floor  
301 East Huron Street  
Ann Arbor, MI 48104

All Bids received on or before the Due Date will be publicly opened and recorded immediately. No immediate decisions are rendered.

**The following forms provided within this ITB Document must be included in submitted bids.**

- **Vendor Conflict of Interest Disclosure Form**
- **City of Ann Arbor Non-Discrimination Ordinance Declaration of Compliance**

**Bids that fail to provide these completed forms listed above upon bid opening will be rejected as non-responsive and will not be considered for award.**

Hand delivered bids will be date/time stamped/signed by the Procurement Unit or City Customer Service at the address above in order to be considered. Normal business hours are 9:00 a.m. to 3:00 p.m. Monday through Friday, excluding Holidays. The City will not be liable to any Bidder for any unforeseen circumstances, delivery or postal delays. Postmarking to the Due Date will not substitute for receipt of the Bid. Each Bidder is responsible for submission of their Bid.

Additional time for submission of bids past the stated due date and time will not be granted to a single Bidder; however, additional time may be granted to all Bidders when the City determines in its sole discretion that circumstances warrant it.

## Award

The City intends to award a Contract/Purchase Order to the lowest responsible Bidder(s) providing the best value to the City. The City may, at its sole discretion, award line-by-line in the best interest of value to the City.

Responsible bidder means a bid submitted, which conforms in all aspects of the requirements set forth in the invitation to bid. All aspects could include references, past experience, past performance, and qualifications.

## Official Documents

The City of Ann Arbor officially distributes bid documents from the Procurement Unit or through the Michigan Intergovernmental Trade Network (MITN). Copies of the bid documents obtained from any other source are not Official copies. Addenda and other bid information will only be posted to these official distribution sites. If you obtained City of Ann Arbor Bid documents from other sources, it is recommended that you register on [www.MITN.info](http://www.MITN.info) and obtain an official Bid.

## Taxes

Municipalities are exempt from Michigan State Sales and Federal Excise taxes. Do not include such taxes in the bid figure(s). The City will furnish the successful bidder with tax exemption certificates when requested.

## Withdrawal of Bids

After the time of opening, no Bid may be withdrawn for the period of one-hundred and twenty (120) days.

## Non-Discrimination Requirements

All contractors proposing to do business with the City shall satisfy the non-discrimination administrative policy adopted by the City Administrator in accordance with the Section 9:158 of the Ann Arbor City Code. Breach of the obligation not to discriminate shall be a material breach of the contract. Contractors are required to post a copy of Ann Arbor's Non-Discrimination Ordinance attached at all work locations where its employees provide services under a contract with the City.

## Conflict Of Interest Disclosure

The City of Ann Arbor Purchasing Policy requires that prospective Vendors complete a Conflict of Interest Disclosure form. A contract may not be awarded to the selected Vendor unless and until the Procurement Unit and the City Administrator have reviewed the Disclosure form and determined that no conflict exists under applicable federal, state, or local law or administrative regulation. Not every relationship or situation disclosed on the Disclosure Form may be a disqualifying conflict. Depending on applicable law and regulations, some contracts may awarded on the recommendation of the City Administrator after full disclosure, where such action is allowed by law, if demonstrated competitive pricing exists and/or it is determined the award is in the best interest of the City. A copy of the Vendor Conflict of Interest Disclosure Form is attached.

## Debarment

Submission of a Bid in response to this ITB is certification that the Bidder is not currently debarred, suspended, proposed for debarment, and declared ineligible or voluntarily excluded from participation in this transaction by any State or Federal departments or agency. Submission is also agreement that the City will be notified of any changes in this status.

## Disclosures

After bids are opened, all information in a submitter's bid is subjected to disclosure under the provisions of Michigan Public Act No. 442 of 1976, as amended (MCL 15.231 et seq.) known as the "Freedom of Information Act." The Freedom of Information Act also provides for the complete disclosure of contracts and attachments thereto except where specifically exempted.

## Bid Protest

All Bid protests must be in writing and filed with the Purchasing Agent within five (5) business days of the award action. The bidder must clearly state the reasons for the protest. If a bidder contacts a City Service Area/Unit and indicates a desire to protest an award, the Service Area/Unit shall refer the bidder to the Purchasing Agent. The Purchasing Agent will provide the bidder with the appropriate instructions for filing the protest. The protest shall be reviewed by the City Administrator or designee whose decision shall be final.

*Any inquiries or requests regarding this procurement should be only submitted in writing to the Designated City Contacts provided herein. Attempts by the Offeror to initiate contact with anyone other than the Designated City Contacts provided herein that the prospective Offeror believes can influence the procurement decision, e.g., Elected Officials, City Administrator, Selection Committee Members, Appointed Committee Members, etc., may lead to immediate elimination from further consideration.*

## Cost Liability

The City of Ann Arbor assumes no responsibility or liability for costs incurred by the Bidder prior to the execution of a contract with the City. By submitting a bid, a bidder agrees to bear all costs incurred or related to the preparation, submission and selection process for the bid.

## Reservation of Rights

The City of Ann Arbor reserves the right to accept any bid or alternative bid proposed in whole or in part, to reject any or all bids or alternatives bids in whole or in part and to waive irregularity and/or informalities in any bid and to make the award in any manner deemed in the best interest of the City.

## INVITATION TO BID

City of Ann Arbor  
Guy C. Larcom Municipal Building  
Ann Arbor, Michigan 48107

Ladies and Gentlemen:

The undersigned, as Bidder, declares that this Bid is made in good faith, without fraud or collusion with any person or persons bidding on the same Contract; that this Bidder has carefully read and examined the bid documents, including City Nondiscrimination requirements, Vendor Conflict of Interest Form, Instructions to Bidders, Bid Forms, Purchase Order Terms and Conditions, General Conditions, Detailed Specifications, and all Addenda, and understands them. The Bidder declares that it conducted a full investigation of the work proposed and is fully informed as to the nature of the work and the conditions relating to the work's performance.

The Bidder acknowledges that it has not received or relied upon any representations or warrants of any nature whatsoever from the City of Ann Arbor, its agents or employees, and that this Bid is based solely upon the Bidder's own independent business judgment.

*In accordance with these bid documents, and Addenda numbered , the undersigned, as Bidder, proposes to deliver to the City all product/services herein described for the amounts set forth in the Bid Forms.*

The Bidder declares that it has become fully familiar with the liquidated damage clauses for completion times and for compliance with City Code Chapter 112, understands and agrees that the liquidated damages are for the non-quantifiable aspects of non-compliance and do not cover actual damages that may be shown and agrees that if awarded the Contract, all liquidated damage clauses form part of the Contract.

Bidder further agrees that the cited provisions of Chapter 14 form a part of this Contract.

The Bidder declares that it has become familiar with the City Conflict of Interest Disclosure Form and certifies that the statement contained therein is true and correct.

In submitting this Bid, it is understood that the right is reserved by the City to accept any Bid, to reject any or all Bids, to waive irregularities and/or informalities in any Bid, and to make the award in any manner the City believes to be in its best interest.

\*\*Received Addendum No. 1\*\*

SIGNED THIS DAY OF , 2018.

Alexander Chemical Corporation, A Carus Company  
Bidder's Name

  
Authorized Signature of Bidder

315 Fifth Street, Peru, IL 61354  
Official Address

Kelly Frasco/Global Product Manager  
(Print Name of Signer Above)

800-435-6856  
Telephone Number

bids@caruscorporation.com  
Email Address for Award Notice

## LEGAL STATUS OF BIDDER

(The Bidder shall fill out the appropriate form and strike out the other three.)

Bidder declares that it is:

\* A corporation organized and doing business under the laws of the State of Illinois  
\_, for whom, bearing the office title of \_, whose signature is affixed to this Bid, is authorized to  
execute contracts.

NOTE: If not incorporated in Michigan, please attach the corporation's Certificate of Authority

~~\* A limited liability company doing business under the laws of the State of \_\_\_\_\_, whom  
\_\_\_\_\_ bearing the title of \_\_\_\_\_  
whose signature is affixed to this proposal, is authorized to execute contract on behalf of the  
LLC.~~

~~\* A partnership organized under the laws of the state of \_\_\_\_\_ and filed in the county  
of \_\_\_\_\_, whose members are (list all members and the street and mailing address of  
each) (attach separate sheet if necessary) \_\_\_\_\_~~

~~\* An individual whose signature with address is affixed to this Bid:  
(initial here) \_\_\_\_\_~~

**Authorized Official**

Kelly Frasco Date April 24, 2018

(Print) Name Kelly Frasco Title Global Product Manager

Company: Alexander Chemical Corporation, A Carus Company

Address: 315 Fifth Street, Peru, IL 61354

Contact Phone ( ) 800-435-6856 Fax ( ) 815-224-6697

Email bids@caruscorporation.com



**SECTION 2**  
**CITY OF ANN ARBOR**  
**STANDARD SPECIFICATIONS**  
**FOR**  
**SODIUM HYDROXIDE**

*This specification pertains to sodium hydroxide (NaOH) for use in the treatment of municipal water supplies. Chemicals supplied under this specification must meet or exceed the requirements of ANSI/AWWA B501-93 and NSF/ANSI Standard 60.*

**PART 1: General Information**

**Part 1.1 Definitions**

The following definitions shall apply in this specification:

***Manufacturer:*** Any party that produces Sodium hydroxide (caustic soda) as covered by this specification.

***Purchaser:*** Any party that enters into a contract, either written or verbal, to purchase sodium hydroxide in accordance with the provisions of this specification.

***Vendor:*** Any party that enters into a contract, either written or verbal, to supply sodium hydroxide for purchase in accordance with this specification.

**Part 1.2 Affidavit of Compliance**

The purchaser requires an affidavit from the manufacturer or vendor that the sodium hydroxide furnished under the purchaser's orders conforms to NSF/ANSI Standard 60 and meets or exceeds the specifications of this standard.

**Part 1.3 Rejection**

***Notice of Nonconformance.*** If the sodium hydroxide does not meet the requirements of this standard, a notice of nonconformance shall be provided by the purchaser to the vendor within 10 working days of receipt of the shipment at its point of destination. The results of the purchaser's test shall prevail unless the vendor notifies the purchaser within five working days of receipt of the notice of nonconformance that a retest is desired. On receipt of the request for a retest, the purchaser shall forward to the vendor one of the sealed samples taken in accordance to section 4.1 of this standard. In the event that the retest results do not agree with the test results of the purchaser, the other sealed sample shall be forwarded to a referee laboratory agreed upon by both parties for analysis. The results of the referee laboratory's analysis shall be considered final. If the shipment is found to be in compliance with this standard, then the cost of the referee

laboratory shall be assumed by the purchaser. If the shipment is found not to meet the specifications of this standard, the cost of the referee laboratory shall be assumed by the vendor.

If the material delivered is found to not meet the requirements of this standard, the responsibility of removal from the point of destination shall fall wholly on the vendor. An exception to this point may be made if a price adjustment is made between the vendor and the purchaser.

## **PART 2: Specifications**

### **Part 2.1 Description**

50% Sodium hydroxide solution is normally a clear and colorless liquid but may sometimes be slightly colored and turbid. It is a caustic liquid and is neither combustible nor explosive. However, caustic soda can react violently or explosively with many organic chemicals. This solution begins to crystallize at 12°C. Considerable heat is generated when water is added to caustic soda which may result in boiling and splattering of hot caustic solution.

### **Part 2.2 Physical Requirements**

Sodium hydroxide is a compound that is commonly produced in the electrolytic manufacture of chlorine. In the anhydrous form, it is white to slightly off white, opaque or translucent solid that rapidly absorbs moisture from the atmosphere. Liquid sodium hydroxide is a solution of anhydrous sodium hydroxide and water.

### **Part 2.3 Chemical Requirements**

Liquid sodium hydroxide supplied under this specification shall contain approximately 50 percent sodium hydroxide (NaOH).

### **Part 2.4 Impurities**

The sodium hydroxide provided under this specification shall contain no soluble or insoluble material, either organic or inorganic, capable of producing deleterious or injurious effects on the health of those consuming water that has been properly treated with the sodium hydroxide.

The sodium hydroxide supplied under this specification shall be diaphragm or membrane grade.

This material shall be certified as suitable for contact with or treatment of drinking water by an accredited certification organization in accordance with ANSI/NSF Standard 60, Drinking Water Treatment Chemicals – Health Effects.

The manufacturer or supplier shall furnish a certificate of analysis that includes but is

not limited to the following parameters: sodium hydroxide, sodium oxide, sodium chloride, sodium carbonate, sodium chlorate, sodium sulfate, aluminum, silicon, calcium, magnesium, iron, manganese, lead, mercury, arsenic, potassium, bromide, bromate.

### **PART 3: Delivery**

#### **Part 3.1 Marking**

Each shipment of material shall carry with it some means of identification. Accompanying each shipment shall be documentation showing the net weight, the name of the manufacturer, the brand name (if any) and other information as required by applicable laws and regulations.

#### **Part 3.2 Shipping**

Liquid sodium hydroxide shall be delivered in properly cleaned self-unloading tank trucks. All bulk loads shall be accompanied by certified weight tickets. Size of load shall meet load limit restrictions. Plant facilities include two (2) 3250 gallon fiberglass reinforced plastic tanks with two inch fill lines.

### **PART 4: Verification**

#### **Part 4.1 Sampling**

Samples shall be taken at the point of destination, in accordance with AWWA B501-93, section 5.1, unless the shipment is accompanied by a certified analysis from the manufacturer or vendor.

#### **Part 4.2 Testing**

All testing shall be done in accordance to the most current and applicable AWWA standard for sodium hydroxide (eg. B501-93 Section 5.3-5.5). The following is a partial list of chemical and physical characteristics that may be tested:

- 1. Alkali ( $\text{Na}_2\text{O}$ ).**
- 2. Hydroxide.**
- 3. Sodium Carbonate**

### SECTION 3: INSURANCE

Effective the date of this Agreement, and continuing without interruption during the term of this Agreement, Contractor shall provide certificates of insurance to the City on behalf of itself, and when requested any subcontractor(s).

A. The certificates of insurance shall meet the following minimum requirements.

1. Worker's Compensation Insurance in accordance with all applicable state and federal statutes. Further, Employers Liability Coverage shall be obtained in the following minimum amounts:

Bodily Injury by Accident - \$500,000 each accident  
Bodily Injury by Disease - \$500,000 each employee  
Bodily Injury by Disease - \$500,000 each policy limit

2. Commercial General Liability Insurance equivalent to, as a minimum, Insurance Services Office form CG 00 01 07 98 or current equivalent. The City of Ann Arbor shall be an additional insured. There shall be no added exclusions or limiting endorsements including, but not limited to: Products and Completed Operations, Explosion, or Pollution. Limited Pollution endorsement is allowed if Broadened Pollution Liability Coverage is included in the Motor Vehicle Liability Insurance. Further, the following minimum limits of liability are required:

\$1,000,000 Each occurrence as respect Bodily Injury Liability or  
Property Damage Liability, or both combined  
\$2,000,000 Per Job General Aggregate  
\$1,000,000 Personal and Advertising Injury

3. Motor Vehicle Liability Insurance, including Michigan No-Fault Coverages, equivalent to, as a minimum, Insurance Services Office form CA 00 01 07 97 or current equivalent. The City of Ann Arbor shall be an additional insured. There shall be no added exclusions or limiting endorsements. Coverage shall include all owned vehicles, all non-owned vehicles and all hired vehicles. Further, the limits of liability shall be \$1,000,000 for each occurrence as respects Bodily Injury Liability or Property Damage Liability, or both combined. Pollution Liability – Broadened Coverage Required

4. Umbrella/Excess Liability Insurance shall be provided to apply in excess of the Commercial General Liability, Employers Liability and the Motor Vehicle coverage enumerated above, for each

occurrence and for aggregate in the amount of \$1,000,000.

- B. Insurance required under A.2 and A.3 above of this contract shall be considered primary as respects any other valid or collectible insurance that the City may possess, including any self-insured retentions the City may have; and any other insurance the City does possess shall be considered excess insurance only and shall not be required to contribute with this insurance. Further, the Contractor agrees to waive any right of recovery by its insurer against the City.
- C. Documentation must provide and demonstrate an unconditional 30 day written notice of cancellation in favor of the City of Ann Arbor. Further, the documentation must explicitly state the following: (a) the policy number; name of insurance company; name and address of the agent or authorized representative; name and address of insured; project name; policy expiration date; and specific coverage amounts; (b) any deductibles or self-insured retentions which shall be approved by the City, in its sole discretion; (c) that the policy conforms to the requirements specified. An original certificate of insurance may be provided as an initial indication of the required insurance, provided that no later than 21 calendar days after commencement of any work the Contractor supplies a copy of the endorsements required on the policies. Upon request, the Contractor shall provide within 30 days a copy of the policy(ies) to the City. If any of the above coverages expire by their terms during the term of this contract, the Contractor shall deliver proof of renewal and/or new policies to the Administering Service Area/Unit at least ten days prior to the expiration date.

## SECTION 4: BID FORM

*All Bidders shall submit pricing in the format requested herein.*

|                             |                  |                |
|-----------------------------|------------------|----------------|
| SODIUM HYDROXIDE 50% BULK   | \$ 665.00        | DRY TON        |
| FREIGHT                     | \$ 83.00         | TON            |
| <b>TOTAL DELIVERED COST</b> | <b>\$ 748.00</b> | <b>DRY TON</b> |

The sodium hydroxide shall be either diaphragm or membrane grade.

INVOICE TERMS: Discount of % 0 or \$ 0 will be allowed for payment of invoice thirty (30) days from day of delivery and acceptance.

OTHER TERMS: Less than 30 days, E.O.M., Proximo, etc., will not be considered in determining award of contract.

Sodium Hydroxide shall be supplied to the City of Ann Arbor Water Treatment Plant, f.o.b. destination, freight prepaid. Contractor shall be responsible for transferring the product from transport vehicle to the City of Ann Arbor storage vessel. Bidder shall specify minimum shipping amount if any:

3,000 gallon loads minimum

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QUANTITY: The annual quantity is approximately **360 tons**. This quantity is for estimating purposes only, not a guarantee of actual usage. Product will be ordered on an "as needed" basis. All prices are to remain firm.

MONITORING: The successful Provider may provide a telemetry device(s) for tank monitoring that provides data to the Provider on tank level, so that ordering product is unnecessary and resupply is managed by the supplier according to the needs of the Water Treatment Plant. This device (these devices) will be at no cost to the City of Ann Arbor.

## SECTION 5: PRICING

Supplier may revise the price semi-annually using the formula below, using the Producers Price Index (PPI) published by the U.S. Bureau of Labor Statistics ("BLS"). The choice of specific BLS Producers Price index or indices and the weighting given to a choice of multiple indices will be mutually agreed upon by the City and the Provider. Seasonally unadjusted indices will be used. The adjusted price will be in effect for six months only, at which time it will be adjusted again or revert to the bid price (base selling price).

- The Supplier should include in their bid an appropriate index or indices and the weighting to be applied to each. The Supplier should include the Series ID number with their bid and include their proposed revision formula.
- The Supplier will adjust the price semiannually, on January 20 and July 20 (if the renewal extensions are exercised or the contract is multiyear). The bid price (base selling price) must be in effect for at least 6 months before the first price adjustment.
- The Base Selling Price will be the amount bid by the Supplier.
- The Base Period Factor, denoted with a subscripted zero (in the example:  $E_0$  and  $D_0$ ), shall consist of an average of the most recent finalized indices for a period of one year, immediately preceding the date of the approved City Council resolution for the product being purchased, for that particular representative index. For monthly published indices this will be the arithmetic average of the twelve most recently published finalized indices. For quarterly published indices this will be the arithmetic average of the four most recently published finalized indices.
- The Adjustment Factor, denoted with no subscript (in the example:  $E$  and  $D$ ), shall be based upon an average of the six most recently published monthly indices, (or three most recently published quarterly indices) at the time of the revision, for that particular index. For timeliness, if any monthly or quarterly index is still preliminary (designated with a P in the published numbers) at the time of the revision, it will be used in its preliminary state.
- Should the index referenced cease to be published or is published in an alternate form (different Series Number, Base Date, or Period), a mutually agreed upon and similar index will be used for future adjustments.
- When Base Dates are revised by the BLS, rebasing shall be done as needed based upon the old and new reference base period.
- The US Bureau of Labor Statistics Producers Price indices can be found at [www.bls.gov/ppi](http://www.bls.gov/ppi)
- The Revision Formula is:  $P = P_0[r/100(X/X_0) + s/100(Y/Y_0) + t/100(Z/Z_0) + \dots]$   
Where
  - $P_0$  = Base Selling Price or original bid price as per the Bid Documents.
  - $P$  = Revised product price for the new future six month period.
  - $X_0$  = Base Period Factor for a selected index.
  - $X$  = Adjustment Factor for the same index.
  - $r + s + t + \dots = 100$  = weighted proportion of selected index in revision formula

Following is an example of a revision formula. The parameters are defined below.

$$P = P_0 \times [0.70 (E/E_0) + 0.30 (D/D_0)]$$

Product Price

$P_0$  = Base Selling Price or original bid price as per the Bid Documents

$P$  = Revised product price for the new future six month period.

Electric Power

$E_0$  = Base Period Factor for Electric Power Distribution – East North Central

$E$  = Adjustment Factor for Electric Power Distribution – East North Central PPI Monthly Index - Series ID: PCU221122221122433, Not Seasonally Adjusted, Base Date: 9012

Diesel

$D_0$  = Base Period Factor for #2 Diesel Fuel

$D$  = Adjustment Factor for #2 Diesel Fuel PPI Monthly Index - Series ID: WPU057303, Not Seasonally Adjusted, Base Date: 8200



## **City of Ann Arbor: General Terms and Conditions**

The following General Terms and Conditions shall apply.

**Tax Exemption:** The City of Ann Arbor is tax exempt, ID# 38-6004534.

**Acceptance of Contract:** This order is the City's contract to purchase the goods and services described on the reverse front side of this document from the Vendor. The City's placement of this order is expressly conditioned upon the Vendor's acceptance of all the terms and conditions of purchase contained on or attached to this purchase order. All specifications, drawings, and data submitted to the Vendor with this order are hereby incorporated and made part hereof.

**Amendments:** No agreement or understanding to modify this contract shall be binding upon the City unless in writing and signed by the City's authorized agent.

**Delivery:** All prices must be F.O.B. delivery point. Time is of the essence on this contract. If delivery dates cannot be met, the Vendor agrees to advise the City, in writing of the earliest possible shipping date. The City reserves the right to cancel or purchase elsewhere and hold the Vendor accountable.

**Risk of Loss:** Regardless of F.O.B. point, the Vendor agrees to bear all risk of loss, injury, or destruction of goods and materials ordered herein which may for any reason occur prior to delivery or acceptance by the City, whichever is later. No such loss, injury, or destruction shall release the Vendor from any obligations hereunder.

**Inspection:** Goods and materials must be properly packaged. Damaged goods and materials will not be accepted. The City reserves the right to inspect the goods at a reasonable time subsequent to delivery where circumstances or conditions prevent effective inspection of the goods at the time of delivery. All rejected goods shall be returned to the Vendor at no cost to the City, whether the damage is readily apparent at the time of delivery or later. The City's acceptance is conditioned on such inspection.

**Patents and Copyrights:** If an article sold and delivered to the City hereunder shall be protected by any applicable patent or copyright, the Vendor agrees to indemnify and save harmless the City, from and against any and all suits, claims, judgments, and costs instituted or recovered against it by any person whomsoever on account of the use or sale of such articles by the City in violation or right under such patent or copyright.

**Uniform Commercial Code:** All applicable portions of the Michigan Uniform Commercial Code shall govern contracts for goods with the City of Ann Arbor; except as modified by contract documents.

**Non-waiver of Rights:** No failure of either party to exercise any power given to it hereunder or to insist upon strict compliance by the other party with its obligations hereunder, and no custom or practice of the parties at variance with the terms hereof, nor any payment under this agreement shall constitute a waiver of either party's right to demand exact compliance with the terms hereof.

**Material Safety Data Sheets:** Applicable Material Safety Data Sheets, in compliance with OSHA/MIOSHA hazard communication regulations/standards, must be provided by the Vendor to the City at the time of purchase.

**Assignments:** The Vendor agrees not to assign or transfer this contract or any part thereof without the written consent of the City of Ann Arbor, acting through its authorized representative. Any unauthorized assignment may subject the contractor to immediate termination.

**Laws Governing, Severability:** This contract shall be governed by and construed according to the laws of the State of Michigan. Vendor agrees to submit to the jurisdiction and venue of the Circuit Court of Washtenaw County, MI, or if original jurisdiction is established, the U.S. District Ct. for Eastern District of MI, Southern Division. The Vendor stipulates venues referenced are convenient and waives any claim of non-convenience. If any term herein is found to be ineffective, unenforceable or illegal under any present or future laws, such term shall be fully severable, and the remaining terms shall not be affected and shall remain full force and effect.

**Prevailing Wage:** It shall be the responsibility of the Vendor to comply, when applicable, with the prevailing wage requirements and/or the Davis-Bacon Act as amended.

**Living Wage:** It shall be the responsibility of the Vendor to comply, when applicable, with the City of Ann Arbor's Living Wage Ordinance as defined in Chapter 23, Section 1:811-1:821.

**Non-Discrimination:** It shall be the responsibility of the Vendor to comply, when applicable, with, all State, Federal and Local non-discrimination laws, including MCL 37.2209 and Section 9:158 of the City Code.

**Indemnification:** To the fullest extent permitted by law the Vendor shall indemnify, defend and hold the City, its officers, employees and agents harmless from all suits, claims, judgments and expenses including attorney's fees resulting or alleged to result from any act or omission, associated with the performance of this contract by the Vendor or anyone acting on the Vendor's behalf under this contract. The Vendor shall not be responsible to indemnify the City for losses or damages caused by or resulting from the City's sole negligence. This indemnity survives delivery and acceptance of the Vendor's goods and services.

**Warranty:** The Vendor warrants to the City that all goods and services furnished hereunder will conform in all respects to the terms of this contract, including any drawings, specifications and standards incorporated herein. In addition, the Vendor warrants the goods and services are suitable for and will perform in accordance with the purposes for which they were intended.

**Payment Terms:** The City of Ann Arbor's payment terms are net 30. The payment date will be calculated based on the invoice receipt date or delivery date, whichever is later.

**Payments:** All invoices for goods and services shall be emailed to [accountspayable@a2gov.org](mailto:accountspayable@a2gov.org). Mailed invoices shall be addressed to the City of Ann Arbor, Accounts Payable, P.O. Box 8647, Ann Arbor, MI 48107, as indicated on the front of this purchase order. Invoices must include the Vendor's name, phone number, and clearly listed item descriptions, quantities and units of measure. The Vendor acknowledges and understands that invoices not addressed as stated above shall have the net 30 begin once the invoice is received by Accounts Payable.

**Compliance with Laws:** The Vendor certifies that in performing this contract it will comply with all applicable provisions of Federal, State and Local laws, regulations, rules and orders.

**Termination for Cause:** In the event the Vendor fails, at any time, to comply with, fully perform or strictly adhere to any covenant, condition or representation contained within the contract, the City shall have the right to give written notice to Vendor of such failure. If such failure is not cured to the City's satisfaction within ten (10) business days from the time of delivery to Vendor of such notice, the City shall have the right to terminate immediately without the requirement of a further notice.



\*\*\*N/A\*\*\*

## Vendor Conflict of Interest Disclosure Form

All vendors interested in conducting business with the City of Ann Arbor must complete and return the Vendor Conflict of Interest Disclosure Form in order to be eligible to be awarded a contract. Please note that all vendors are subject to comply with the City of Ann Arbor's conflict of interest policies as stated within the certification section below.

If a vendor has a relationship with a City of Ann Arbor official or employee, an immediate family member of a City of Ann Arbor official or employee, the vendor shall disclose the information required below.

1. No City official or employee or City employee's immediate family member has an ownership interest in vendor's company or is deriving personal financial gain from this contract.
2. No retired or separated City official or employee who has been retired or separated from the City for less than one (1) year has an ownership interest in vendor's Company.
3. No City employee is contemporaneously employed or prospectively to be employed with the vendor.
4. Vendor hereby declares it has not and will not provide gifts or hospitality of any dollar value or any other gratuities to any City employee or elected official to obtain or maintain a contract.
5. Please note any exceptions below:

| Conflict of Interest Disclosure*  |   |
|---|---|
| Name of City of Ann Arbor employees, elected officials or immediate family members with whom there may be a potential conflict of interest. | <input type="checkbox"/> Relationship to employee             |
|   | <input type="checkbox"/> Interest in vendor's company         |
|   | <input type="checkbox"/> Other (please describe in box below) |
|   |   |

\*Disclosing a potential conflict of interest does not disqualify vendors. In the event vendors do not disclose potential conflicts of interest and they are detected by the City, vendor will be exempt from doing business with the City.

| I certify that this Conflict of Interest Disclosure has been examined by me and that its contents are true and correct to my knowledge and belief and I have the authority to so certify on behalf of the Vendor by my signature below: |                |  |
|---|----------------|--|
| Alexander Chemical Corporation, A Carus Company   |                | 800-435-6856                                     |
| Vendor Name   |                | Vendor Phone Number                              |
|    | April 24, 2018 | Kelly Frasco/Global Product Manager              |
| Signature of Vendor Authorized Representative   | Date           | Printed Name of Vendor Authorized Representative |

Questions about this form? Contact Procurement Office City of Ann Arbor Phone: 734/794-6500, [procurement@a2gov.org](mailto:procurement@a2gov.org)

**CITY OF ANN ARBOR  
DECLARATION OF COMPLIANCE**

**Non-Discrimination Ordinance**

The "non discrimination by city contractors" provision of the City of Ann Arbor Non-Discrimination Ordinance (Ann Arbor City Code Chapter 112, Section 9:158) requires all contractors proposing to do business with the City to treat employees in a manner which provides equal employment opportunity and does not discriminate against any of their employees, any City employee working with them, or any applicant for employment on the basis of actual or perceived age, arrest record, color, disability, educational association, familial status, family responsibilities, gender expression, gender identity, genetic information, height, HIV status, marital status, national origin, political beliefs, race, religion, sex, sexual orientation, source of income, veteran status, victim of domestic violence or stalking, or weight. It also requires that the contractors include a similar provision in all subcontracts that they execute for City work or programs.


In addition the City Non-Discrimination Ordinance requires that all contractors proposing to do business with the City of Ann Arbor must satisfy the contract compliance administrative policy adopted by the City Administrator. A copy of that policy may be obtained from the Purchasing Manager

The Contractor agrees:

- (a) To comply with the terms of the City of Ann Arbor's Non-Discrimination Ordinance and contract compliance administrative policy.
- (b) To post the City of Ann Arbor's Non-Discrimination Ordinance Notice in every work place or other location in which employees or other persons are contracted to provide services under a contract with the City.
- (c) To provide documentation within the specified time frame in connection with any workforce verification, compliance review or complaint investigation.
- (d) To permit access to employees and work sites to City representatives for the purposes of monitoring compliance, or investigating complaints of non-compliance.

The undersigned states that he/she has the requisite authority to act on behalf of his/her employer in these matters and has offered to provide the services in accordance with the terms of the Ann Arbor Non-Discrimination Ordinance. The undersigned certifies that he/she has read and is familiar with the terms of the Non-Discrimination Ordinance, obligates the Contractor to those terms and acknowledges that if his/her employer is found to be in violation of Ordinance it may be subject to civil penalties and termination of the awarded contract.

~~Alexander Chemical Corporation, A Carus Company~~  
Company Name

  
Signature of Authorized Representative Date

Kelly Frasco/Global Product Manager  
Print Name and Title

315 Fifth Street, Peru, IL 61354  
Address, City, State, Zip

800-435-6856                      bids@caruscorporation.com  
Phone/Email address

**Questions about the Notice or the City Administrative Policy, Please contact:**  
Procurement Office of the City of Ann Arbor  
(734) 794-6500



## CITY OF ANN ARBOR NON-DISCRIMINATION ORDINANCE

Relevant provisions of Chapter 112, Nondiscrimination, of the Ann Arbor City Code are included below.

You can review the entire ordinance at [www.a2gov.org/humanrights](http://www.a2gov.org/humanrights).

**Intent:** It is the intent of the city that no individual be denied equal protection of the laws; nor shall any individual be denied the enjoyment of his or her civil or political rights or be discriminated against because of actual or perceived age, arrest record, color, disability, educational association, familial status, family responsibilities, gender expression, gender identity, genetic information, height, HIV status, marital status, national origin, political beliefs, race, religion, sex, sexual orientation, source of income, veteran status, victim of domestic violence or stalking, or weight.

**Discriminatory Employment Practices:** No person shall discriminate in the hire, employment, compensation, work classifications, conditions or terms, promotion or demotion, or termination of employment of any individual. No person shall discriminate in limiting membership, conditions of membership or termination of membership in any labor union or apprenticeship program.

**Discriminatory Effects:** No person shall adopt, enforce or employ any policy or requirement which has the effect of creating unequal opportunities according to actual or perceived age, arrest record, color, disability, educational association, familial status, family responsibilities, gender expression, gender identity, genetic information, height, HIV status, marital status, national origin, political beliefs, race, religion, sex, sexual orientation, source of income, veteran status, victim of domestic violence or stalking, or weight for an individual to obtain housing, employment or public accommodation, except for a bona fide business necessity. Such a necessity does not arise due to a mere inconvenience or because of suspected objection to such a person by neighbors, customers or other persons.

**Nondiscrimination by City Contractors:** All contractors proposing to do business with the City of Ann Arbor shall satisfy the contract compliance administrative policy adopted by the City Administrator in accordance with the guidelines of this section. All city contractors shall ensure that applicants are employed and that employees are treated during employment in a manner which provides equal employment opportunity and tends to eliminate inequality based upon any classification protected by this chapter. All contractors shall agree not to discriminate against an employee or applicant for employment with respect to hire, tenure, terms, conditions, or privileges of employment, or a matter directly or indirectly related to employment, because of any applicable protected classification. All contractors shall be required to post a copy of Ann Arbor's Non-Discrimination Ordinance at all work locations where its employees provide services under a contract with the city.

**Complaint Procedure:** If any individual believes there has been a violation of this chapter, he/she may file a complaint with the City's Human Rights Commission. The complaint must be filed within 180 calendar days from the date of the individual's knowledge of the allegedly discriminatory action or 180 calendar days from the date when the individual should have known of the allegedly discriminatory action. A complaint that is not filed within this timeframe cannot be considered by the Human Rights Commission. To file a complaint, first complete the complaint form, which is available at [www.a2gov.org/humanrights](http://www.a2gov.org/humanrights). Then submit it to the Human Rights Commission by e-mail ([hrc@a2gov.org](mailto:hrc@a2gov.org)), by mail (Ann Arbor Human Rights Commission, PO Box 8647, Ann Arbor, MI 48107), or in person (City Clerk's Office). For further information, please call the commission at 734-794-6141 or e-mail the commission at [hrc@a2gov.org](mailto:hrc@a2gov.org).

**Private Actions For Damages or Injunctive Relief:** To the extent allowed by law, an individual who is the victim of discriminatory action in violation of this chapter may bring a civil action for appropriate injunctive relief or damages or both against the person(s) who acted in violation of this chapter.

THIS IS AN OFFICIAL GOVERNMENT NOTICE AND  
MUST BE DISPLAYED WHERE EMPLOYEES CAN READILY SEE IT.





Alexander  
Chemical  
*A Carus Company*

### AFFIDAVIT OF COMPLIANCE

Sodium Hydroxide is purchased, packaged and delivered by Alexander Chemical Corporation, A Carus Company in compliance with AWWA Standards and NSF.

Kelly Frasco/Global Product Manager



**PRODUCT SPECIFICATION SHEET**  
Sodium Hydroxide – Membrane Cell 50%  
Effective 12/20/2014

**Chemical Properties:**

|                      |               |                     |               |
|----------------------|---------------|---------------------|---------------|
| Chemical formula:    | NaOH          | Molecular weight:   | 40.00 g/mol   |
| Sodium hydroxide, %: | 49.50 - 51.00 | Sodium oxide, %:    | 38.00 - 40.00 |
| Sodium carbonate, %: | ≤ 0.05        | Sodium chloride, %: | ≤ 0.01        |
| Sodium sulfate, %:   | ≤ 0.003       | Sodium chlorate, %: | ≤ 0.0005      |
| Copper, ppm:         | ≤ 0.30        | Iron, ppm:          | ≤ 5.00        |
| Nickel, ppm:         | ≤ 0.30        |                     |               |

**Physical Properties:**

|                                     |                            |
|-------------------------------------|----------------------------|
| Boiling Point: 291°F                | Freezing Point: 54°F       |
| Specific Gravity, g/mL: 1.53 @ 60°F | Solubility: Water Miscible |

NSF International maximum use: 100 mg/L

**Distributed by:**

Alexander Chemical Corporation  
Kingsbury Industrial Park  
Kingsbury, Indiana 46345  
800/348-8827



# SAFETY DATA SHEET

## 1. Identification

**Product identifier** Caustic soda - Sodium hydroxide (20-50%)

**Other means of identification** Not available.

**Recommended use** Caustic soda - Sodium hydroxide is a strong neutralizing agent and a chemical base used in chemical manufacturing.

**Recommended restrictions** None known.

**Manufacturer/Importer/Supplier/Distributor information**

**Company name** Carus Corporation

**Address** 315 5th Street  
Peru, IL

**Telephone** (815) 223-1500

**Toll Free** (800) 435-6856

**Fax** (815) 224-6816

**E-mail** salesmkt@caruscorporation.com

**Website** www.caruscorporation.com

**Company name** Alexander Chemical Corporation, a Carus Group Inc. Company

**Address** 7593 S. First Road,  
Kingsbury Industrial Park, USA

**Website** www.alexanderchemical.com

**Company name** Sierra Chemical Co, a Carus Group Inc. Company

**Address** 2302 Larkin Circle  
Sparks, NV 89431

**Website** www.sierrachemsales.com

**Contact person** Dr. Chithambarathanu Pillai

**Telephone** (800) 348-8827 - All other non-emergency inquiries about the product should be directed to the company

**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

**Physical hazards** Corrosive to metals Category 1

**Health hazards** Skin corrosion/irritation Category 1A  
Serious eye damage/eye irritation Category 1

**OSHA defined hazards** Not classified.

### Label elements



**Signal word** Danger

**Hazard statement** May be corrosive to metals. Causes severe skin burns and eye damage.

**Precautionary statement**

**Prevention**

Do not breathe mist or vapor. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling. Keep only in original container.



|  |  |
|--|--|
| <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. 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

#### Substances

| Chemical name    | Common name and synonyms | CAS number | %     |
|------------------|--------------------------|------------|-------|
| Sodium hydroxide |                          | 1310-73-2  | 20-50 |

**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. Contact can cause corrosive burns, corneal damage, and blindness. Causes permanent skin damage (scarring). May cause burns in mucous membranes, throat, esophagus and stomach.  |
| <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>  | In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation immediately. In case of shortness of breath, give oxygen. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse. 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. |

### 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. |
| <b>Specific methods</b>  | Use water spray to cool unopened containers.  |
| <b>General fire hazards</b>  | The product is non-combustible. Contact with certain metals liberates flammable gas. Contact with moisture or water may generate sufficient heat to ignite nearby combustible materials.  |

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

DO NOT touch spilled material. 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. For waste disposal, see Section 13 of the SDS. Containers must be labeled.

### 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. Store away from incompatible materials.

## 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/m <sup>3</sup> |

#### US. ACGIH Threshold Limit Values

| Components                       | Type    | Value               |
|----------------------------------|---------|---------------------|
| Sodium hydroxide (CAS 1310-73-2) | Ceiling | 2 mg/m <sup>3</sup> |

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

| Components                       | Type    | Value               |
|----------------------------------|---------|---------------------|
| Sodium hydroxide (CAS 1310-73-2) | Ceiling | 2 mg/m <sup>3</sup> |

### Biological limit values

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

### 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. Use a NIOSH/MSHA approved air purifying respirator as needed to control exposure. Consult with respirator manufacturer to determine respirator selection, use, and limitations. Use positive pressure, air-supplied respirator for uncontrolled releases or when air purifying respirator limitations may be exceeded. Follow respirator protection program requirements (OSHA 1910.134 and ANSI Z88.2) for all respirator use.

**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**

|   |                                  |
|---|----------------------------------|
| <b>Appearance</b>                                   | Clear to slightly turbid liquid. |
| <b>Physical state</b>                               | Liquid.                          |
| <b>Form</b>   | Liquid.                          |
| <b>Color</b>  | Clear to slightly turbid.        |
| <b>Odor</b>   | None.                            |
| <b>Odor threshold</b>                               | Not available.                   |
| <b>pH</b>   | 14                               |
| <b>Melting point/freezing point</b>                 | -26 - 54 °F (-32.22 - 12.22 °C)  |
| <b>Flash point</b>                                  | Not applicable.                  |
| <b>Evaporation rate</b>                             | Not applicable.                  |
| <b>Flammability (solid, gas)</b>                    | Not available.                   |
| <b>Upper/lower flammability or explosive limits</b> |                                  |
| <b>Flammability limit - lower (%)</b>               | Not applicable.                  |
| <b>Flammability limit - upper (%)</b>               | Not applicable.                  |
| <b>Vapor pressure</b>                               | 13 - 110 mm Hg at 100 °F / 37 °C |
| <b>Vapor density</b>                                | Not applicable.                  |
| <b>Relative density</b>                             | 1.2 - 1.5 ± 0.03                 |
| <b>Relative density temperature</b>                 | 77 °F (25 °C)                    |
| <b>Partition coefficient (n-octanol/water)</b>      | No data available.               |
| <b>Auto-ignition temperature</b>                    | Not available.                   |
| <b>Decomposition temperature</b>                    | Not available.                   |
| <b>Viscosity</b>                                    | Not applicable.                  |
| <b>Other information</b>                            |                                  |
| <b>VOC (Weight %)</b>                               | Not applicable.                  |

**10. Stability and reactivity**

|   |   |
|---|---|
| <b>Reactivity</b>                         | The product is non-reactive under normal conditions of use, storage and transport. Sodium hydroxide rapidly absorbs carbon dioxide from air forming sodium carbonate. Water, when added to sodium hydroxide solutions may cause localized overheating and possible splattering. Never add water to caustic solution. Add sodium hydroxide to water slowly and in small amounts. Generates considerable heat when a sodium hydroxide solution is mixed with an acid. Corrosive to aluminium, zinc and tin liberating flammable hydrogen gas. |
| <b>Chemical stability</b>                 | Stable at normal conditions.  |
| <b>Possibility of hazardous reactions</b> | Hazardous polymerization does not occur.  |
| <b>Conditions to avoid</b>                | Water, moisture.  |
| <b>Incompatible materials</b>             | Water. Acids. Oxidizers. Halogens. Aluminum powder. Organic compounds. Metals.  |
| <b>Hazardous decomposition products</b>   | Sodium oxides.  |

## 11. Toxicological information

### Information on likely routes of exposure

|              |   |
|--------------|---|
| Ingestion    | Causes digestive tract burns.               |
| Inhalation   | Causes severe respiratory tract irritation. |
| Skin contact | Causes severe skin burns.                   |
| Eye contact  | Causes severe eye burns.                    |

**Symptoms related to the physical, chemical and toxicological characteristics** Corrosive. Prolonged contact causes serious eye and tissue damage. Contact can cause corrosive burns, corneal damage, and blindness. Causes permanent skin damage (scarring). May cause burns in mucous membranes, throat, esophagus and stomach.

### Information on toxicological effects

|                                   |                           |
|-----------------------------------|---------------------------|
| Acute toxicity                    | Strongly corrosive.       |
| 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. |

## 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.

| Components                       |      | Species                                 | Test Results                 |
|----------------------------------|------|---|------------------------------|
| Sodium hydroxide (CAS 1310-73-2) |      |   |                              |
| Aquatic                          |      |   |                              |
| Crustacea                        | EC50 | Water flea (Ceriodaphnia dubia)         | 34.59 - 47.13 mg/l, 48 hours |
| Fish                             | LC50 | Bluegill (Lepomis macrochirus)          | 99 mg/l, 48 hours            |
|                                  |      | Western mosquitofish (Gambusia affinis) | 125 mg/l, 96 hours           |

|                                      |  |
|--------------------------------------|--|
| <b>Persistence and degradability</b> | No data available.   |
| <b>Bioaccumulative potential</b>     | No data available.   |
| <b>Mobility in soil</b>              | The product is water soluble and may spread in water systems.  |
| <b>Other adverse effects</b>         | The product may affect the acidity (pH-factor) in water with risk of harmful effects to aquatic organisms. |

## 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. Dispose of contents/container in accordance with local/regional/national/international regulations. 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>Waste codes should be assigned by the user based on the application for which the product was used.   |
| <b>Waste from residues / unused products</b> | 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                    | UN1824  |
| UN proper shipping name      | Sodium hydroxide solution   |
| 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           | B2, IB2, N34, T7, TP2   |
| Packaging exceptions         | 154   |
| Packaging non bulk           | 202   |
| Packaging bulk               | 242   |

### DOT BULK

#### BULK

|                              |   |
|------------------------------|---|
| UN number                    | UN1824  |
| UN proper shipping name      | Sodium hydroxide solution   |
| 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           | B2, IB2, N34, T7, TP2   |
| Packaging exceptions         | 154   |
| Packaging non bulk           | 202   |
| Packaging bulk               | 242   |

### IATA

|                              |   |
|------------------------------|---|
| UN number                    | UN1824  |
| UN proper shipping name      | Sodium hydroxide solution   |
| Transport hazard class(es)   |   |
| Class                        | 8   |
| Subsidiary risk              | -   |
| Label(s)                     | 8   |
| Packing group                | II  |
| Environmental hazards        | No  |
| ERG Code                     | 8L  |
| Special precautions for user | Read safety instructions, SDS and emergency procedures before handling. |

### IMDG

|  |   |
|--|---|
| UN number  | UN1824  |
| UN proper shipping name  | SODIUM HYDROXIDE SOLUTION   |
| Transport hazard class(es)   |   |
| Class  | 8   |
| Subsidiary risk  | -   |
| Label(s)   | 8   |
| Packing group  | II  |
| Environmental 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.<br>This product is listed in the IBC Code.<br>Ship type: 3<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.

**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

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

**Hazard categories** Immediate Hazard - Yes  
Delayed Hazard - No  
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.

**Clean Water Act (CWA) Section 112(r) (40 CFR 68.130)** Hazardous substance

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

**Food and Drug Administration (FDA)** Total food additive  
Direct food additive  
GRAS food additive

**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**

Sodium hydroxide (CAS 1310-73-2)

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

Sodium hydroxide (CAS 1310-73-2)

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

Sodium hydroxide (CAS 1310-73-2)

**US. Rhode Island RTK**

Sodium hydroxide (CAS 1310-73-2)

**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** 18-July-2014

**Revision date** -

**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. CARUS 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 Carus Corporation, and shall be the sole responsibility of the holder or user of the product.

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The Public Health and Safety Organization

## NSF Product and Service Listings

These NSF Official Listings are current as of **Wednesday, April 18, 2018** at 12:15 a.m. Eastern Time. Please [contact NSF International](#) to confirm the status of any Listing, report errors, or make suggestions.

Alert: NSF is concerned about fraudulent downloading and manipulation of website text. Always confirm this information by clicking on the below link for the most accurate information: <http://info.nsf.org/Certified/PwsChemicals/Listings.asp?>

[CompanyName=alexander&TradeName=sodium+hydroxide&](#)

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

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#### Alexander Chemical Corporation

7593 South First Road  
Kingsbury Industrial Park  
Kingsbury, IN 46345  
United States  
800-445-9458  
630-955-6050

**Facility :** Kingsbury, IN

**Sodium Hydroxide**

**Trade Designation**

**Product Function**

**Max Use**



|  |  |          |
|--|--|----------|
| 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 |

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Number of matching Manufacturers is 1

Number of matching Products is 2

Processing time was 1 seconds



**ALEXANDER CHEMICAL CORP.**  
7593 S. First Road  
Kingsbury, IN 46345  
219/393-5558

**CERTIFICATE OF ANALYSIS**

**Product:** Sodium Hydroxide (or Caustic Soda)

**Customer:** \_\_\_\_\_

**Purchase Order #:** \_\_\_\_\_ **Sales Order #:** \_\_\_\_\_

**Lot #:** \_\_\_\_\_ **Shipment Date:** \_\_\_\_\_

**Analysis**

**Sodium Hydroxide, %:** \_\_\_\_\_ 50.29

**Sodium Oxide, %:** \_\_\_\_\_ 38.99

**Sodium Chloride, %:** \_\_\_\_\_ 0.0034

**Iron, ppm:** \_\_\_\_\_ 0.24

**Specific Gravity @ 20°C, g/mL:** \_\_\_\_\_ 1.5337



Maximum Usage Level:  
100 mg/L

\_\_\_\_\_  
**Signature**



# CERTIFICATE OF LIABILITY INSURANCE

DATE(MM/DD/YYYY)  
06/30/2017

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>                                       |                                       |
|   | <b>PHONE (A/C, No, Ext):</b> (866) 283-7122                | <b>FAX (A/C, No.):</b> (800) 363-0105 |
| <b>INSURED</b><br>Alexander Chemical Corp<br>7593 S First Road<br>Kingsbury Industrial Park<br>Kingsbury IN 46345 USA | <b>E-MAIL ADDRESS:</b>                                     |                                       |
|   | <b>INSURER(S) AFFORDING COVERAGE</b>                       |                                       |
|   | <b>NAIC #</b>  |                                       |
|   | <b>INSURER A:</b> Commerce & Industry Ins Co               | 19410                                 |
|   | <b>INSURER B:</b> New Hampshire Ins Co                     | 23841                                 |
|   | <b>INSURER C:</b> National Union Fire Ins Co of Pittsburgh | 19445                                 |
| <b>INSURER D:</b> Everest Indemnity Insurance Company   | 10851  |                                       |
| <b>INSURER E:</b>   |  |                                       |
| <b>INSURER F:</b>   |  |                                       |

Holder Identifier :

**COVERAGES****CERTIFICATE NUMBER:** 570067415778**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  |
|----------|--|---|----------|---------------------------------------|-------------------------|-------------------------|---|
| A        | <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY<br><input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR<br><br>GEN'L AGGREGATE LIMIT APPLIES PER:<br><input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC<br>OTHER: |   |          | GL4406544                             | 07/01/2017              | 07/01/2018              | EACH OCCURRENCE \$2,000,000<br>DAMAGE TO RENTED PREMISES (Ea occurrence) \$100,000<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 |
| C        | <b>AUTOMOBILE LIABILITY</b><br><input checked="" type="checkbox"/> ANY AUTO OWNED AUTOS ONLY<br><input checked="" type="checkbox"/> HIRED AUTOS ONLY<br><input type="checkbox"/> SCHEDULED AUTOS NON-OWNED AUTOS ONLY  |   |          | CA 350-63-48                          | 07/01/2017              | 07/01/2018              | 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"/> UMBRELLA LIAB <input checked="" type="checkbox"/> EXCESS LIAB<br>DED <input checked="" type="checkbox"/> RETENTION \$10,000  |   |          | XC8CU00003171                         | 07/01/2017              | 07/01/2018              | EACH OCCURRENCE \$5,000,000<br>AGGREGATE \$5,000,000  |
| B        | <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  | <input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N | N/A      | WC015883699 (AOS)<br>WC015883700 (CA) | 07/01/2017              | 07/01/2018              | <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                                   |
| C        |  |   |          |                                       |                         |                         |   |

Certificate No : 570067415778

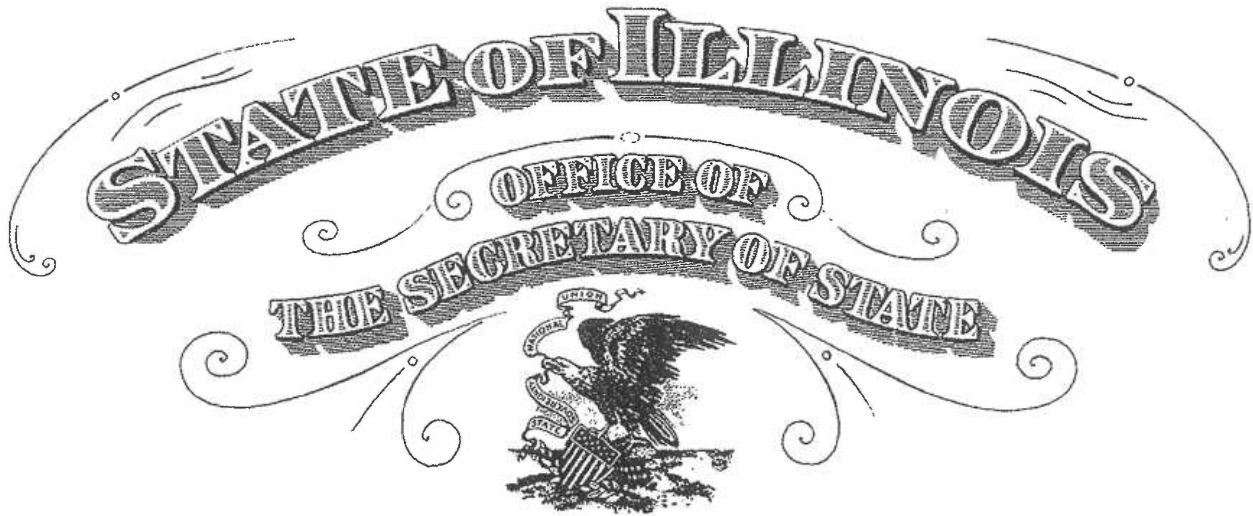
DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Evidence of Insurance. The Auto Liability policy includes Form CA9948 (Pollution Liability - Broadened Coverage for Covered Autos).

**CERTIFICATE HOLDER****CANCELLATION**

|   |  |
|---|--|
| Alexander Chemical Corp.<br>315 Fifth Street<br>Peru IL 61354 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. |
|   | AUTHORIZED REPRESENTATIVE<br><br><i>Aon Risk Services Central, Inc.</i>  |

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***To all to whom these Presents Shall Come, Greeting:***

*I, Jesse White, Secretary of State of the State of Illinois, do hereby certify that I am the keeper of the records of the Department of Business Services. I certify that*

ALEXANDER CHEMICAL CORPORATION, A DOMESTIC CORPORATION, INCORPORATED UNDER THE LAWS OF THIS STATE ON DECEMBER 17, 1982, APPEARS TO HAVE COMPLIED WITH ALL THE PROVISIONS OF THE BUSINESS CORPORATION ACT OF THIS STATE RELATING TO THE PAYMENT OF FRANCHISE TAXES, AND AS OF THIS DATE, IS IN GOOD STANDING AS A DOMESTIC CORPORATION IN THE STATE OF ILLINOIS.



***In Testimony Whereof, I hereto set***  
*my hand and cause to be affixed the Great Seal of*  
*the State of Illinois, this 13TH*  
*day of OCTOBER A.D. 2017 .*

*Jesse White*

SECRETARY OF STATE