



March 7, 2018

## REQUEST FOR PROPOSAL

### NOTICE TO BIDDERS

Sealed proposals will be received by the Board of Water and Light (BWL) up to **2:00 P.M., local time, Wednesday, 03/21/18**, for furnishing:

#### Mid-Michigan Bulk Water Chemicals Consortium 2018

Proposals must be in full accordance with the enclosed Specification.

Proposals may be submitted via hard copy or electronic format. If submitting hard copy proposals, please submit two (2) signed BWL Proposal Form(s) with attachments and supplemental information to the **Board of Water and Light, Attn: Cathy Davila, Purchasing and Warehousing Department, 1232 Haco Dr, Lansing, Michigan 48910**. Do not include copies of the other BWL RFP documents in your proposal package. The proposal package shall be marked on the outside of the cover with:

- (a) The Bidder's name;
- (b) The title of the Specification;
- (c) Attention: Rachele Hall, Board of Water and Light;

Electronic copies shall be in a non-protected, Adobe pdf format and e-mailed to [sealedbids@lbwl.com](mailto:sealedbids@lbwl.com). For ease of identification, enter "**(your company name) Chemical Consortium Bid**" in the subject line of your e-mail proposal. You will receive an automatic reply to your submittal which confirms the BWL has received your emailed message.

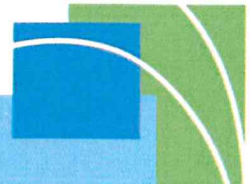
The BWL reserves the right to reject any or all proposals, waive irregularities or technicalities in any proposal, and accept any proposal in whole or in part, which in the opinion of the BWL, is in its best interest. The BWL does not limit the methods or factors to be used for evaluation.

Questions regarding this RFP will be accepted through **Wednesday, 3/14/2018**. Responses to these questions will be issued to all bidders via addenda to this RFP (reference Article 6 in the enclosed Instruction to Bidders). Direct all questions concerning this Request for Proposal via email to **Cathy Davila** at [catherine.davila@lbwl.com](mailto:catherine.davila@lbwl.com).

Sincerely,

BOARD OF WATER AND LIGHT

Cathy Davila  
Purchasing & Warehousing Department  
(517) 702-6288  
(517) 702-6042 Fax  
[catherine.davila@lbwl.com](mailto:catherine.davila@lbwl.com)



**INSTRUCTIONS TO BIDDERS**  
**Mid-Michigan Bulk Water Chemical Consortium 2018**

**1. THE REQUEST FOR PROPOSAL CONSISTS OF THE FOLLOWING:**

- (a) Notice to Bidders;
- (b) Instructions to Bidders;
- (c) Addenda, if issued;
- (d) Scope of Work / Specifications, including
  - (i) Special Requirements;
  - (ii) Drawings and List of Drawings.
- (e) Proposal Form;
- (f) Sworn and Notarized Affidavit of Compliance - Iran Economic Sanctions Act; and
- (g) Terms and Conditions for Consulting Services.

**2. PROPOSAL SECURITY**

N/A

**3. TERMS AND CONDITIONS**

Do not submit BIDDER's standard terms and conditions as a replacement to the BWL's Standard Terms and Conditions. BIDDER shall submit their proposal based upon the BWL's Standard Terms and Conditions as attached. BIDDER may request clarifications, tender exceptions consistent with Section 8 (or provide alternative language that corresponds to a tendered exception as provided in Section 8) to the BWL's Standard Terms and Conditions. Exceptions to the BWL's Standard Terms and Conditions must be noted on the Proposal Form in the space provided. Wholesale rejection of the BWL's Standard Terms and Conditions, as well as replacing with BIDDER'S standard terms and conditions will not receive consideration and result in a rejection in BIDDER'S proposal in its entirety. Further, proposals which are submitted and contingent upon BIDDER'S standard terms and conditions will be rejected.

**4. BIDDER'S RESPONSIBILITY**

It shall be the BIDDER'S responsibility to be familiar with the Proposal Documents and with the BWL, scope of work, and conditions that are likely to be encountered. BIDDER shall visit the site and specific areas on the site wherein the Work will be performed.

Any failure by the successful BIDDER to familiarize itself with conditions likely to be encountered, to acquaint itself with the available information, or to attend any meeting of BIDDERS shall not relieve the BIDDER from responsibility for providing the specified equipment, materials, and service. A failure to comply with this requirement does not constitute grounds for extra compensation over the pricing stated in the BIDDER'S proposal.

BIDDER shall be prepared to make a presentation at the BWL's request on its proposal and to answer questions.

**5. AVAILABILITY OF LABOR AND MATERIALS**

The BWL will not furnish any labor, facilities, services, utilities, materials, equipment or supplies unless specifically stated in the Proposal Documents.

BIDDER shall assess and determine the availability of necessary labor and the prevailing wages applicable to that workforce. In addition, BIDDER shall assess and determine the availability of materials and equipment necessary to fulfill the contract in a complete and timely manner. The BWL will not honor any claim for additional cost premised on the unavailability of materials or equipment, shortage of labor, or unexpected wage rates.

**6. ADDENDA**

The BWL will clarify any questions or correct the Request for Proposal by the issuance of an Addendum to all BIDDERS.



Each BIDDER shall acknowledge receipt of each Addendum by filling in the blank space provided on the Proposal Form.

## 7. DRAWINGS

N/A

## 8. PREPARATION OF PROPOSAL FORM

The Proposal Form is included in the Proposal Documents. BIDDER shall prepare proposals and submit them as stated in the Notice to Bidders.

Proposals must be prepared in full accordance with the Proposal Documents. The proposal price(s) stated on the Proposal Form must include all cost provisions of the complete Scope of Work. If the BIDDER chooses to submit an alternate or take an exception to any provision contained in the Proposal Documents, the alternate or exception must be specifically stated in BIDDER'S proposal, must reference the objectionable article of the Proposal Documents, and must propose alternate language or alternate Work. Any exception to the Proposal Documents, including any exception to the BWL's Standard Terms and Conditions must be raised in BIDDER'S proposal as exceptions provided subsequently will not be considered. Once a purchase order has been issued, and the Acknowledgement returned, a binding contract exists between the parties and further negotiation of terms is not permitted.

Proposals received after the time and date for receipt of proposals will not be accepted. The BIDDER is responsible for timely delivery of the Proposal at the designated location and time for receipt of Proposals.

**The Proposal must be signed with the full name and address of the BIDDER. Proposals received without signature will not be accepted.** If the BIDDER is a co-partnership, the firm name and signature of all parties are required. If the BIDDER is a corporation, full corporate name, signature of authorized official is required. BIDDER shall certify that the person who signs the proposal is empowered to do so by the corporation. Such certificate shall be up-to-date and current at time of the Proposal Form submittal.

A proposal may not be modified, withdrawn or canceled unilaterally by the BIDDER for a period of sixty (60) days following the time and date designated for the receipt of Proposals, and BIDDER so agrees in submitting the Proposal. A proposal submission is a confirmation by the BIDDER that it is prepared to commence and complete the various stages of the Work as described in the Proposal Documents.

Expenses for developing and presenting proposals shall be the responsibility of the BIDDER. It is the BIDDER'S responsibility to ensure that no conflict of interest or other ethical concern precludes the BWL from considering BIDDER'S proposal.

## 9. SUBSTITUTION

Under certain circumstances, the Proposal Documents may permit substitution of products. Those areas where substitution is permitted will be designated with the qualifying phrase or equal as may be approved by the BWL REPRESENTATIVE. If BIDDER would like to substitute a product, BIDDER must make a proposal including the products specified in the Proposal Documents AND an alternate proposal including the proposed substitution, specifically referencing any price change based on the substitution.

BIDDER'S proposal shall contain data to substantiate that the substitution is, in fact, equal to the products specified. Substantiating data may consist of drawings or other documents necessary or helpful to indicate any modifications resulting from use of proposed substitutions. BIDDER bears the burden of proving that the proposed substitutions meet the quality standards established in the Proposal Documents.

If BIDDER is eventually awarded a Purchase Order, the Purchase Order will indicate whether the substitution was acceptable or whether the original product must be used.

The acceptance of a substitution does not alleviate BIDDER of any contractual responsibility.

## 10. BONDS

N/A

## **11. INSURANCE**

The certificates of insurance required by the Contract Documents must also accompany the Acknowledgment of Award. All these documents should be directed to the attention of the BWL Buyer listed on the Notice to Bidders with a copy to the person designated as "BWL REPRESENTATIVE.". The purchase order number must be indicated on the Acknowledgement, bonds, and certificates of insurance.

## **12. EVALUATION OF PROPOSALS**

All proposals will be sealed until the time designated on the Notice to Bidders. At the opening, the names of all BIDDERS will be made public.

To evaluate the proposals, the BWL will consider such factors as responsiveness of proposal, price, time of completion, exceptions to the Proposal Documents, financial stability, recent and past experience and similar factors in determining which proposal it deems to be in its best interest. The BWL does not herein limit the methods or factors to be used for evaluation. The intent of the evaluation process is to choose the best-evaluated proposal.

The BWL reserves the right to enter into private negotiations with the selected BIDDER(S), for further scrutiny, even though these negotiations may result in changes to the BWL specifications or to the BIDDER(S) services, price quotations, etc.

The BWL may reject any Proposal, waive irregularities or technicalities in any Proposal, and accept any Proposal in whole or in part. The BWL may cancel, in whole or in part, the entire Request for Proposal at any time prior to full execution of a contract between both parties.

## **13. QUESTIONS, MEETING OF BIDDERS, AND ADDENDA**

In the beginning of the bid preparation period, the BWL REPRESENTATIVE may notify each BIDDER of a Meeting of BIDDERS to be held at a later date, usually during the second week of the proposal preparation time. If a meeting is held, BIDDERS are required to attend the meeting to present their questions about the Proposal Documents, to receive answers to questions, to receive copies of Addenda, to participate in open discussion of the Project, and to participate in the only conducted tour of the Site. The Notice of Meeting will give complete details about the meeting and instructions regarding preparation for the meeting

Changes, revisions, and corrections that may result from the discussions that occur during the Meeting of BIDDERS will be confirmed by the issuance of an Addendum. Suggestions of topics for the Meeting agenda should be directed to the person designated on the Notice to Bidders.

## **14. CONTRACT PRICE**

The contract price shall be equal to the proposal price adjusted to any price changes as agreed upon in writing by the BIDDER and the BWL.

The contract price may be modified via a change order upon mutual agreement of both parties.

## **15. EXECUTION OF ACKNOWLEDGMENT OF AWARD**

The successful BIDDER shall, within twenty-four hours after issuance of the Purchase Order, return the properly executed Acknowledgment of Award to the person designated on the Notice to Bidders. BIDDER shall certify that the person who signs the Acknowledgment is empowered to do so. Upon execution, an agreement will be deemed consummated and the documents, as specified in the list of RFP documents set forth in Section 1 herein, along with any mutually agreed written changes, shall constitute the full and binding agreement between the parties. If the properly executed Acknowledgement, along with any required bonds and insurance certificates, are not returned within five (5) calendar days, the BWL may deem the Purchase Order rejected and offer the Purchase Order to another BIDDER without penalty.

## **16. CONFIDENTIALITY**

All complete, in-process or conceptual work are the sole property of the BWL and may not be used without the consent of the BWL. Any product used, such as, drawings and specifications, photos, campaigns, drafts, etc. are the sole property of the BWL. All BWL information will be kept confidential at all times. The BIDDER shall not disclose to others, without the written consent of the BWL, any information concerning the service provided, the organization, its personnel, or its activities, which the BIDDER may obtain as a result of, or in connection with the performance of the services.



## 17. FREEDOM OF INFORMATION ACT (FOIA)

The BWL is subject to the Freedom of Information Act (MCL §15.231 et seq.). The BWL may be required to make available certain information submitted with your bid or proposal available to the public if requested. This information may include comparative pricing and other data which the BIDDER may normally consider to be proprietary or confidential. If the BIDDER submits any information it deems to be exempt from FOIA requirements, the BIDDER shall clearly mark it as such.

## 18. LOCAL PREFERENCE

*Applies to bids of \$100,000 or greater only.*

Businesses with an office in the BWL service area shall be given the following advantage when the BWL receives a sealed proposal:

- (a) After the proposals are evaluated and the best-evaluated proposal is selected, the BWL shall determine whether the best-evaluated BIDDER is a Local business.
- (b) If a Local business was not selected as the best-evaluated BIDDER due entirely to its proposal price being higher than the price of the best-evaluated proposal, the BWL shall determine whether the best-evaluated Local business's proposal was within 5% of the proposal price of the best evaluated proposal. If so, this Local business shall then have the opportunity to reduce its price to match the price of the original best-evaluated BIDDER, and upon such agreement, shall be deemed the best-evaluated proposal.
- (c) If more than one Local business is within 5% of the price of the best-evaluated proposal and is otherwise equal to the best-evaluated proposal, and the Local business identified in (b) refuses to lower its proposal price, the same opportunity shall be afforded to the other qualifying Lansing-based businesses, in order of ascending price.

If no Lansing-based business agrees to the conditions described above, the contract shall be awarded to the person or business originally deemed the best-evaluated BIDDER.

## 19. SAFETY

Unless excepted in the Proposal, and accepted by the BWL, all BIDDERS will be required to comply with the BWL's Safety Manual. All BIDDERS should read and understand the BWL Safety Manual before submitting a Proposal. The BWL Safety Manual can be found on the BWL's website, <http://www.lbw.com> by selecting first "Business Services" and then "Doing Business with BWL."

**END OF INSTRUCTIONS TO BIDDERS**

**SCOPE OF WORK**  
**Mid-Michigan Bulk Water Chemicals Consortium 2018**

**1. GENERAL**

The Lansing Board of Water and Light (BWL) is soliciting proposals for a joint chemical contract. This contract is for one year, July 01, 2018 – June 30, 2019. The entities participating in this contract are as follows: BWL, City of Jackson, City of Ann Arbor, City of Lansing, City of Adrian, East Lansing – Meridian Water & Sewer Authority, City of East Lansing, and Delhi Township. All chemicals must conform to NSF standards for use in potable drinking water and meet all specifications listed in bid documents. Prices per ton of chemical are for delivery to any and all of the facilities listed in the proposal.

**2. BOARD OF WATER AND LIGHT BACKGROUND**

The Board of Water and Light was founded in 1885 and is the largest municipally owned electric utility in Michigan and among the 30 largest in the United States. An eight-member Board of Commissioners appointed by the mayor and confirmed by the Lansing City Council governs the BWL.

The Board employs approximately 700 bargaining and non-bargaining employees. The bargaining unit employees are represented by the International Brotherhood of Electrical workers (IBEW) local 352.

The Board owns and operates:

- (a) an electric system, which generates, purchases and distributes electric power and energy, and provides electric service to approximately 95,000 residential, commercial, and industrial customers in the greater Lansing, Michigan area;
- (b) water wells, a raw water transmission system, water conditioning facilities, and an extensive water distribution system serving potable water to approximately 55,000 residential, commercial, and industrial customers in the greater Lansing area;
- (c) steam generation boilers, a steam transmission and distribution system serving approximately 185 customers, and a chilled water facility and distribution piping system serving 16 customers in the city of Lansing.

The Board's total operating revenue for fiscal 2016 was \$360,935,415.

Additional BWL background and information may be viewed at [www.lbwl.com](http://www.lbwl.com).



### 3. DELIVERY AND BILLING ADDRESSES

The chemical is to be delivered and billed to the facilities and cities as listed below:

	<u>DELIVERY ADDRESS</u>	<u>BILLING ADDRESS</u>
LANSING BOARD OF WATER AND LIGHT	<p>Lansing Board of Water and Light Dye Water 148 S. Cedar St. Lansing, MI 48912-1139</p> <p>Deliveries: Mon-Fri 7:00 am – 2:00 pm. Call one hour in advance of delivery. P: 517-643-6621</p> <hr/> <p>Lansing Board of Water and Light Wise Rd. 5411 Wise Rd. Lansing, MI 48911-3409</p> <p>Deliveries: Mon-Fri 7:00 am – 12:00 pm. Call one hour in advance of delivery. P: 517-643-6621</p>	<p>Lansing Board of Water and Light Attn: Accounting Dept.- Accounts Payable P: 517-702-6186 E: <a href="mailto:crystal.jefferson@lbwl.com">crystal.jefferson@lbwl.com</a> E: <a href="mailto:bwlinvoices@lbwl.com">bwlinvoices@lbwl.com</a></p> <p>*Special note: BWL requires all invoices for chemicals to be emailed to us within 3 business days of delivery.</p>
CITY OF ANN ARBOR	<p>Ann Arbor Water Treatment Plant 919 Sunset Road Ann Arbor, MI 48103 Del Hours: 7am to 3pm</p> <hr/> <p>Ann Arbor Waste Water Treatment Plant 49 S. Dixboro Rd Ann Arbor, MI 48105 Del Hours: 8am to 5pm</p>	<p>City of Ann Arbor c/o Finance 301 East Huron St. PO Box 8647 Ann Arbor, MI 48107</p>
CITY OF JACKSON	<p>City of Jackson Water &amp; Wastewater Treatment Plants 740 East Mansion St. Jackson, MI 49203</p> <hr/> <p>Wastewater Treatment Plant 2995 Lansing Ave. Jackson, MI 49201</p>	<p>City of Jackson, Michigan 161 W. Michigan Avenue Jackson, Michigan 49201</p>
CITY OF LANSING	<p>City of Lansing – Public Service Waste Water Division 1625 Sunset Ave Lansing, MI 48917</p> <p>Deliveries: Mon.-Fri. 7:00 am – 2:00 pm. No weekends or holidays unless prearranged or</p>	<p>City of Lansing – Public Service Waste Water Division 1625 Sunset Ave Lansing, MI 48917</p>

	emergency.	
CITY OF ADRIAN	Adrian Water Treatment 815 Bent Oak Ave. Adrian MI 49221  Deliveries: Mon. – Fri. 7:00am to 2:00pm. No weekends or holidays unless prearranged or emergency <hr/> 1001 Oakwood Rd. Adrian, MI 49221	City of Adrian Utilities Attn: Accounting 135 E. Maumee St. Adrian, MI 49221
EAST LANSING-MERIDIAN WATER & SEWER AUTHORITY	2470 Burcham Dr. East Lansing, MI 48823	East Lansing-Meridian Water & Sewer Authority 2470 Burcham Drive East Lansing, MI 48823
CITY OF EAST LANSING	Water Resource Recovery Facility 1700 Trowbridge Road East Lansing, MI 48823 <hr/>	Water Resource Recovery Facility 1700 Trowbridge Road East Lansing, MI 48823 <hr/>
OWOSSO	Waste Water Treatment Plant 1410 Chippewa Trail Owosso, MI 48867  Owosso Water Filtration Plant 1111 Allendale Ave Owosso, MI 48867	City of Owosso Attn: Accounts Payable – Rhonda Pritchett 301 W. Main St. Owosso, MI 48867

4. ESTIMATED ANNUAL USAGES PER MUNICIPALITY

<u>MUNICIPALITY</u>	<u>CHEMICAL</u>	<u>ESTIMATED YEARLY USAGE</u>	<u>MINIMUM DELIVERY</u>
LANSING BOARD OF WATER AND LIGHT	SODIUM HYPOCHLORITE	225,000 gallons	4000-4800 gallon shipments required
	HYDROFLUOSILIC ACID	90 tons	30,000 and 40,000 lbs. shipments
	FERRIC CHLORIDE	48 ton	18 ton 2 – 3 times a year
	PEBBLE QUICKLIME	11,650 tons	1 or 2 50 ton deliveries a week



CITY OF JACKSON	SODIUM HYPOCHLORITE	73,000 gallons	5,000 gallons maximum
	HYDROFLUOSILIC ACID	55 tons	Self-unloading truck, 2,500 gallons required
	FERRIC ACID	60 tons	3,000 gal
	PEBBLE QUICKLIME	3,700 tons	50-100 ton loads (prefer 100 ton del)
CITY OF ANN ARBOR	SODIUM HYPOCHLORITE	850 tons	60,000 gal once per month
	HYDROFLUOSILIC ACID	68 tons	Delivery is 2-3 times per year
	FERRIC CHLORIDE	Dry: 105 Liquid: 48,000	3,000 gal min
	PEBBLE QUICKLIME	5,000 ton	Delivery 2-3 times per week
CITY OF LANSING	FERRIC CHLORIDE	468 dry tons	8,000 dry gallon shipments preferred
	SODIUM HYPOCHLORITE	80,000 gallons	4000-4800 gallon shipments required
	PEBBLE QUICKLIME	850 dry ton	10 deliveries a year
CITY OF ADRIAN	SODIUM HYPOCHLORITE	45,000 gallons	4,500 gallons every two months
	FERRIC CHLORIDE	66,000 liquid gallons	6,000 liquid gallons every five weeks
	HYDROFLUOSILIC ACID	14,000 lbs wet	Min delivery 2,000 gals -PRICE IN LBS ON INVOICE
	PEBBLE QUICKLIME	1,200 tons	40 ton dry
EAST LANSING-MERIDIAN WATER & SEWER AUTHORITY	SODIUM HYPOCHLORITE	60,000 gallons	4,000 gallons per delivery, every 2-3 weeks
	HYDROFLUOSILIC ACID	7 tons	2,500 gallons per delivery, about one per year
	FERRIC CHLORIDE	27 liquid tons	Self Unloading truck, 2,500 gal delivery
	PEBBLE QUICKLIME	2,100 tons	Pneumatic truck-load 1 per week
CITY OF EAST LANSING	FERRIC CHLORIDE	420 dry tons	8,000 gallons every two weeks
	SODIUM HYPOCHLORITE	45 wet tons	4,5000 gallons 1 or twice per year
OWOSSO	SODIUM HYPOCHLORITE	54,000 gal	4,500 gal per month
	FERRIC CHLORIDE	72,000 lbs	6,000 lbs Fe per month

	PEBBLE QUICKLIME	720 to 960 tons	60 to 80 tons per month. Max del of 55 tons can be accepted.
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## 5. CHEMICAL SPECIFICATIONS

NSF certification and MSDS shall accompany all orders and shipments. The Contractor/ Driver are responsible for appropriate hoses, adapters, and attachments to properly connect to unloading lines.

### Sodium Hypochlorite

- Shall meet NSF Standard 60 and AWWA B300.
- Sodium Hypochlorite to be between 12% and 17% by weight.

### Hydrofluosilic Acid

- Pricing is on an "as is" basis. Price shall stay the same regardless of the assay received.
- Must meet NSF Standard 60 and AWWA B703-00.
- Truck must be capable of maintaining 20 PSIG air pressure during unloading

### Ferric Chloride

- Dry
  - Actual delivered solution to be 38% ferric chloride
  - Propose per dry ton price
- Liquid Ton
  - Ferric chloride shall be furnished as liquid ferric chloride with a density of 11 to 12 pounds per gallon. The ferric chloride content will be between 38.5% and 45.0% by weight. Bids are to be submitted on a basis of 100% ferric chloride.

### Pebble Quick Lime

- Pebble quicklime shall meet all chemical specifications set forth in AWWA B202-93 unless otherwise specified.
- Water soluble calcium oxide content shall not be less than 90% as determined by the "Modified Scaife Method" as set forth in AWWA-202-88 (ASIM C25-58) Chemical Analysis of Lime
- Pebble Quicklime shall meet the following slaking test as detailed in AWWA 202-93:
  - Place 100 grams of sample from shipment in 400 ml of distilled water at 25°C temperature, stirring constantly for 3 minutes and read temperature. Temperature rise shall be a minimum of 40°C and all lime shall be slaked at the end of 10 minutes.
  - The lime shall not contain any organic or inorganic substances in quantities capable of producing deleterious effect upon the health of people drinking the water that has been treated with it.



- The purchase price of Calcium Oxide shall be based on 90% or greater available calcium oxide content. There shall be a reduction of 1.5% of the bid price for each 1.0%, or fraction thereof, deficiency of available calcium oxide content between 90% and 80%, and a 2.0% reduction for each 10%, or fraction thereof, deficiency of available calcium oxide content below 80% based on analysis done by the municipality's laboratory analysis using method AWWA 202-93.
- The vendor shall supply a sample of each load to the Operations Supervisor upon delivery. One-half of each sample will be retained for 30 days for inspection or analysis by the supplier. The municipality will notify the supplier within ten days of receipt of a shipment that does not meet specifications.

**PROPOSAL FORM**  
**Mid-Michigan Bulk Water Chemical Consortium 2018**

**Note: This form may be completed using MS Word®**

**Provide the following business and contact information:**

Legal Name: <b>Olin Corp. dba Olin Chlor Alkali Products and Vinyls</b>		Federal ID or Social Security Number: <b>FEIN # 36-2278512</b>
Address: <b>1001 31st Street, Suite 200</b>		State of Incorporation <b>Virginia</b>
City: <b>Downers Grove</b>	State & Zip: <b>Illinois 60515</b>	Primary E-Mail: <b>Lctodner@olin.com</b>
Type of Organization: <input checked="" type="checkbox"/> X Corporation <input type="checkbox"/> LLC <input type="checkbox"/> LLP <input type="checkbox"/> Sole Proprietor <input type="checkbox"/> Partnership <input type="checkbox"/> S-Corporation <input type="checkbox"/> Other (Explain)		
Office Phone: <b>800-677-8335</b>	Alternate Office Phone: <b>630-257-3900</b>	Office Fax: <b>N/A</b>
Primary Contact: <b>Lisbeth Todner</b>	Contact Phone: <b>630-243-2265</b>	Contact Fax: <b>N/A</b>
Contact Mobile: <b>N/A</b>	Contact E-Mail: <b>Lctodner@olin.com</b>	Website URL: <b>www.olin.com</b>

**Provide responses to the following questions:**

How many years has your firm been in business under the present ownership?	<b>Under New Ownership since August 2012. Doing business as previous 65 years. Olin -125 years.</b>
Have you done business with the Board of Water and Light? If so, furnish specifics.	<b>Yes, we have supplied Sodium Hypo to all facilities listed. Last contract term July 2016 - June 2017.</b>
Have you done business with the City of Lansing? If so, furnish specifics.	<b>Yes, July 2016 to June 2017 we supplied bulk tank truck of Sodium Hypochlorite.</b>
Have you ever defaulted on a contract or been involved in litigation with the Board of Water and Light or the City of Lansing? If so, furnish specifics.	<b>No, we have never defaulted with LBWL nor with the City of Lansing. We have never had any litigation with neither LBWL nor the City of Lansing</b>
Have you ever defaulted on a contract or been involved in litigation or pending litigation or claims with any other client in the past five years? If so, furnish specifics.	<b>No, we have not defaulted, nor have we ever been involved in any litigation or claims with other clients in the last five years.</b>
List any relationships between your firm's staff and any current BWL employee.	<b>N/A - No relationships between our staff and LBWL employees.</b>
Specify your background, training, experience, credentials and other factors which qualify you to perform the work described in the Scope of Work included in this Request for Proposal.	<b>Olin is the largest manufacturer and distributor of Sodium Hypochlorite. We have an advantage in having our own fleet of dedicated Sodium Hypochlorite bulk tank trucks to facilitate response and delivery time.</b>
List at least three (3) references for similar work you have performed for other clients. Include Client name, contact name, title and phone number.	<b>Please refer to the attached references with details requested.</b>
List subcontractors that you plan to use on this project.	<b>N/A</b>
<b>Indicate any exceptions to the enclosed General Requirements.</b>	<b>Please see attachments.</b>
Include any additional information you may deem helpful in evaluating your proposal.	<b>Attachments for your review and consideration.</b>

**PROPOSAL FORM**  
**Mid-Michigan Bulk Water Chemical Consortium 2018**

The undersigned Bidder hereby acknowledges receipt of the following addenda:


Addendum No.	Date	Enter addenda numbers and received dates if applicable
N/A		

**Provide pricing:**

Activity	Unit Pricing
Sodium Hypochlorite Chemical: Sodium Hypochlorite 12.5% by wt. 15% by vol. Demurrage: Net 30 days, Lead Time: 1-3 days ARO	\$ <u>0.67</u> / gal \$ <u>80.00</u> / hour *first 4 hours free
Hydrofluosilic Acid Chemical in minimum 40,000 lbs. shipments: Chemical in minimum 30,000 lbs. shipments: Chemical split between Dye and Wise Plants minimum 40,000 lbs. shipments: Demurrage:	*Price is based on minimum 4,000 gals. per delivery to the facilities listed in bid documents. \$ <u>No Bid</u> / ton \$ _____ / ton \$ _____ / ton \$ _____ / hour *first 4 hours free
Ferric Chloride Dry Chemical: Liquid Chemical: Demurrage:	\$ <u>No Bid</u> / ton \$ _____ / ton \$ _____ / hour *first 4 hours free
Pebble Quick Lime Chemical: Demurrage:	\$ <u>No Bid</u> / ton \$ _____ / hour *first 4 hours free

The undersigned 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, 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.

The undersigned Bidder certifies that this proposal is made in good faith, without collusion or connection with any other person or persons submitting proposals for the work.

Company Name: <b>Olin Chlor Alkali Products &amp; Vinyls</b>
Signature: 



**PROPOSAL FORM**  
**Mid-Michigan Bulk Water Chemical Consortium 2018**

Name: Mike Jakovich
Title: Director of Caustic
Date: 3/20/18

**END OF PROPOSAL FORM**

## TERMS AND CONDITIONS FOR WATER CHEMICALS

General Requirements may be individually modified or superseded by PURCHASER Supplemental Requirements. In case of conflicts, the PURCHASER Supplemental Requirements shall govern.

### 1. DEFINITIONS

All terms and conditions of the Seller most recent Permit application shall remain in effect except as may be modified herein.

### 2. TERM

The following meanings are ascribed to the terms used in these General Requirements:

**PURCHASER** – means the City of Lansing, by its Board of Water and Light.

**Consortium** – means Mid-Michigan Drinking Water Consortium, consisting of the City of Lansing, by its Board of Water and Light, City of Jackson Water and Wastewater, City of Adrian, Ann Arbor Drinking Water Treatment Plant, East Lansing-Meridian Water and Sewer Authority, Delhi Charter Township, and Delta Township.

**Contract Documents** – means the PURCHASER's solicitation, including the invitation to bid or request for proposal or quotation, instructions to bidders/offerors, SELLER'S response to the solicitation, PURCHASER drawings, the specifications, any addenda or supplements including Change Orders, the purchase order, these General Requirements, and Supplemental Requirements.

**SELLER**– means the individual, partnership, corporation or other entity awarded a purchase order by the PURCHASER.

**Day** – means a calendar day.

**Designated Representative** – means the General Manager of the PURCHASER, or authorized designee. Designated Representative shall be the individual designated to receive submissions and notices from SELLER and to represent the PURCHASER in the performance of the Contract. Any interaction with another division of the PURCHASER shall be coordinated through the Designated Representative.

**Participants** – means entities part of Mid-Michigan Drinking Water Consortium.

**Work** – means the products and services to be furnished under the Contract Documents. Work includes and is the result of performing services, transporting chemicals, and furnishing chemicals.

### 3. TERMS

#### A. QUALITY

- (1) Chemicals shall meet all criteria identified in the Specifications.
- (2) The PURCHASER reserves the right to reject all chemicals that fail to meet those criteria.
- (3) Chemicals that fail to meet those criteria that have been delivered to the PURCHASER must be removed by the SELLER at SELLER's expense.

#### B. CHEMICALS FURNISHED BY SELLER

- (1) The SELLER shall arrange and pay all charges for the proper delivery, receipt, rigging, unloading, and storage of all chemicals requested by the PURCHASER. The place of delivery is the PURCHASER's place of business. The PURCHASER will provide an area for storage of the material at its delivery site. SELLER must supply a sufficient number of individuals to promptly unload and store chemicals. SELLER continues to bear all responsibility for care, custody, control and protection of the chemicals until the chemicals are properly stored. After storage, SELLER retains responsibility only for the quality of the chemicals.

- (2) The SELLER shall notify the PURCHASER's Representative when any material is ready for shipment. Before arranging for any shipment, SELLER must ensure that the delivery will not cause undue blocking at the delivery site.
- (3) SELLER shall supply the manufacturer's name and catalog number for each item, if applicable.
- (4) PURCHASER's Designated Representative must coordinate shipment to the site.
- (5) If requested by the PURCHASER's Designated Representative, SELLER shall furnish copies of bills of lading, shipping manifests, and other papers showing shipment of chemicals and/or reports of their receipt.
- (6) SELLER shall show the PURCHASER's purchase order number and release number on all shipments, packing lists, and invoices. Shipments may be refused without this information.
- (7) All chemicals shall be new and from a reputable manufacturer currently engaged in the production of like chemicals.

#### 4. PERMITS

SELLER shall obtain all permits necessary to transport and deliver chemicals to the PURCHASER. The PURCHASER shall obtain any necessary permit to store the chemicals on its properties.

#### 5. PRICE

All prices shall be a firm delivered price for the term of the contract, unless specified in SELLER's proposal or bid and accepted by the PURCHASER before award. Prices shall include any fuel surcharge.

The PURCHASER shall solely be financially responsible for such material it procures on its own behalf and through its own bilateral contracts under the proposal of this agreement. The LPURCHASER shall not in any shape or form be financially responsible for any procured material obtained from contracts by any other Participant(s) of Consortium.

#### 6. SAFETY

- (1) SELLER shall proceed with the Work in a manner dictated by all applicable federal and state safety regulations, the PURCHASER Safety Manual, and safe practice, using chemicals, tools and rigging of a safe character. The current version of the PURCHASER's Safety Manual can be found at [http://www.lbwl.com/uploadedFiles/MainSite/Content/Doing\\_Business/BWL\\_Safety\\_Manual.pdf](http://www.lbwl.com/uploadedFiles/MainSite/Content/Doing_Business/BWL_Safety_Manual.pdf). SELLER shall strictly comply with these laws, rules and regulations including, but not limited to, OSHA and MIOSHA requirements, including without limitation MIOSHA "Right to Know" obligations, MCL 408.1001 et seq., and shall provide documented evidence of that compliance upon the Designated Representative's request.
- (2) SELLER shall provide and use all protective devices to permit safe working conditions for SELLER's employees and to prevent hazards to employees of other Seller, the PURCHASER and its employees, or the public.
- (3) While on PURCHASER property, SELLER'S personnel shall wear appropriate personal protection equipment.
- (4) If, in the PURCHASER's opinion, SELLER is not proceeding with its Work in a safe manner or in accordance with federal, state, or PURCHASER safety regulations, the PURCHASER may issue a Seller Safety Violation Notice or otherwise stop the Work and direct the SELLER to rectify the unsafe conditions immediately. If SELLER fails to promptly rectify the situation, the PURCHASER may proceed to rectify the unsafe conditions at SELLER'S expense. Compliance with this paragraph shall effect neither the Contract price nor the schedule. SELLER shall comply with all PURCHASERS, OSHA, and MIOSHA confined space requirements and procedures, including PURCHASER permitting requirements.

#### 7. INSURANCE

- (1) At its own expense, SELLER shall acquire and continue in effect for the term of the Contract, insurance providing the following coverage(s):
  - (a) Commercial General Liability Insurance on an occurrence basis. This coverage shall include Personal Injury, Contractual Liability, and Products/Completed Operations insurance. The limit of liability shall be at least \$1,000,000 combined single limit for bodily injury and property damage. There shall be no exclusion for work within any distance of railroad property.
  - (b) Automobile liability insurance that complies with the requirements of the Michigan No-fault law with residual liability limit of at least \$1,000,000 combined single limit for bodily injury and property damage. There shall be coverage for owned, hired, and non-owned vehicles.
  - (c) Worker's compensation insurance as required by Michigan law.



- (2) SELLER shall purchase insurance from companies acceptable to the PURCHASER. Generally, a company rated A- or better by A.M. Best and domiciled in the United States will be acceptable to the PURCHASER. The A.M. Best website can be found at: <http://www.ambest.com/>.
- (3) Certificates of insurance shall state that they will not be canceled nor any changes made, which alters, restricts or reduces the insurance provided or changes the name of the insured, without first giving thirty (30) days' notice in writing to the Corporate Secretary, PURCHASER, 1232 Haco Dr., P.O. Box 13007, Lansing, Michigan 48901.

## **8. INDEMNITY**

SELLER shall, to the fullest extent allowed by law, defend, indemnify, and hold harmless the PURCHASER, the City of Lansing, their respective officers, agents, employees and insurers against any liability, loss, damage, demand, governmental action, citation, cause of action, or expense of whatever nature (including costs of defense, settlement, court costs and attorney's fees) which may result from any loss, injury, death, or damage (including environmental harm) allegedly sustained by any person, firm, corporation, or other entity, which arises out of or is caused by any act or omission of SELLER its officers, agents, or employees in connection with or in any way arising out of this Contract. SELLER's obligations under this paragraph shall survive the expiration or termination of this Contract.

## **9. REMEDIES**

If SELLER fails or refuses to substantially perform according to the terms of this Contract, SELLER shall be declared to be in default by the PURCHASER by a written notice and shall be given an opportunity to perform in accordance with the notice. If the default has not been corrected or begun to be corrected within the time specified in the notice, or the SELLER has ceased to pursue the correction with due diligence, the PURCHASER may elect to (a) "cover" by purchasing the chemicals from another responsible vendor at the lowest cost available to the PURCHASER, and passing any additional cost on to the SELLER, who must pay the additional costs within 30 days of invoice receipt; (b) terminate the agreement and seek damages, or (c) treat the agreement as continuing and require specific performance, or (d) avail itself of any other remedy at law or equity.

If the PURCHASER fails or refuses to substantially perform according to the terms of this Contract, the PURCHASER shall be declared to be in default by the SELLER by a written notice and shall be given an opportunity to perform in accordance with the notice. If the default has not been corrected or begun to be corrected within the time specified in the notice, or the PURCHASER has ceased to pursue the correction with due diligence, the SELLER may elect to (a) terminate the agreement and seek damages, or (b) treat the agreement as continuing and require specific performance, or (c) avail itself of any other remedy at law or equity.

## **10. PLANT PROTECTION AND SECURITY**

- (1) If the Work requires SELLER'S employees to enter a protected or policed area of the PURCHASER, including all utility operating areas, the SELLER shall arrange, in conjunction with PURCHASER security, for visible identification badges for all SELLER personnel employed on such Work. SELLER's trucks or common carriers entering PURCHASER property are subject to inspection.
- (2) SELLER, its employees, or suppliers, shall observe traffic rules, speed regulations, or other safety rules in the operation of its vehicles and equipment on PURCHASER property, as established by PURCHASER.
- (3) SELLER's employees shall comply with the PURCHASER's "Weapons in the Workplace" policy and "Prevention of Violence in the Workplace" policy.

## **11. TIME AND MANNER OF PERFORMANCE**

- (1) The PURCHASER's Designated Representative shall contact SELLER when a shipment of chemicals is needed. The SELLER shall deliver the chemicals within 21 days to the PURCHASER location identified by the PURCHASER's Designated Representative, unless a shorter time is specified in the bid/proposal documents. In some cases, a shipment may be split between two PURCHASER locations.
- (2) SELLER shall keep a sufficient quantity of chemicals on hand to meet the PURCHASER's demands, in accordance with the Specifications.
- (3) Any activities occurring on PURCHASER property shall be performed from 8 a.m. through 5 p.m., Monday through Friday, excluding PURCHASER holidays. If SELLER wishes to perform Work on PURCHASER property during other times, SELLER must receive express written permission from the Designated Representative.

## **12. REPORTING**

SELLER shall provide quarterly reports to the PURCHASER, including sales per month, order fulfillment percentage, backorder reports, on time delivery tracking, and other information requested by the PURCHASER.

### **13. DELAY**

- (1) Time is of the essence in the execution of the Work.
- (2) If SELLER fails to deliver the chemicals within 21 days after demand, or shorter time specified in the bid/proposal documents, and the delay is not caused by the PURCHASER or its agent, SELLER shall pay the PURCHASER's direct costs caused by the delay, including the need to "cover" by purchasing chemicals from another vendor, if applicable. The PURCHASER may elect to waive this penalty, in writing, by permitting a back-order of up to fourteen days past the expected delivery date.

### **13. GOVERNING LAW AND VENUE**

- (1) The Contract Documents shall be interpreted in accordance with the laws of the State of Michigan, without regard to conflict of laws provisions.
- (2) Venue shall be in Ingham County, Michigan.

### **14. FORCE MAJEURE**

Neither the PURCHASER nor SELLER shall be held responsible for any delay or default caused by fire, act of God, riot, terrorist act, other violent act, war, or flood where such cause was beyond the delaying or defaulting party's reasonable control. However, SELLER shall make all reasonable efforts to remove or eliminate such a cause of delay or default and shall, upon the cessation of the cause, diligently pursue performance or its obligation under this Contract. SELLER'S management of its plant operations and compliance with regulations, even if they impact SELLER'S ability to meet the contract requirements, do not constitute force majeure.

### **15. RIGHT TO AUDIT RECORDS**

The PURCHASER shall be entitled to audit the books and records of a SELLER or under any PURCHASER contract or subcontract to the extent that such books, documents, papers and records are pertinent to the performance of such contract or subcontract. The SELLER shall maintain such books and records for a period of three years from the date of final payment under the prime contract for a period of three years from the date of final payment under the subcontract.

### **16. NONDISCRIMINATION**

SELLER agrees 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 race, color, creed, religion, national origin, sex, disability, age, height, weight, veteran status, marital status, or any other reason prohibited by law. A breach of this covenant shall be considered a material breach of contract.

### **17. INDEPENDENT SELLER**

SELLER shall be, for all purposes, an independent SELLER and not an employee or agent of the PURCHASER. SELLER shall not hold itself out as an agent of the PURCHASER or the City of Lansing.

SELLER acknowledges that PARTICIPANTS are, for all purposes, independent SELLER(S) and not an employee or agent of the PURCHASER or the City of Lansing.

### **18. TERMINATION FOR CONVENIENCE**

The PURCHASER may also terminate this Contract for its own convenience upon thirty days written notice. If the PURCHASER terminates for convenience, however, it shall compensate SELLER for all Specification-conforming chemicals delivered to the PURCHASER.

### **19. CONTRACT**

The final versions of the Contract Documents, taken as a whole, constitute the sole and final agreement between the parties (Contract), which can only be modified by a written document properly executed by both parties.



## 20. LOADING/UNLOADING

Prior to offloading any chemical, the facility personnel shall:

- Verify the Bill of Lading for the correct chemical and correct PURCHASER delivery address.
- Assure that the material is being off loaded into the correct bulk tank.
- Determine the available tank volume is sufficient for the incoming delivery.
- Require that the driver remain in line of sight of the delivery hose and bulk tank connection at all times.
- Require that the driver have the appropriate facility personal protective equipment, including but not limited to hardhat, steel toed shoes, chemical safety goggles, etc.
- Require that the driver have appropriate spill response supplies and that any storm drains in the immediate area will be protected with appropriate "drain blocker" mats or plugs prior to starting the off-loading process.

Immediately report to management any problems with driver actions, PURCHASER tank fill connections, fill valve containment, tank level indicators, secondary containment, or any other safety or environmental concern.



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 Olin Chlor Alkali Products & Vinyls(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.

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

x *Mike Jakovich*

By: Mike Jakovich

Its: Director of Caustic

Date: March 20, 2018

STATE OF Illinois )

COUNTY OF DuPage )

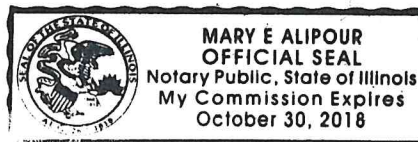
This instrument was acknowledged before me on the 20 day of March, 2018, by Mike Jakovich.

*Mary E Alipour*  
\_\_\_\_\_  
, Notary Public

*DuPage* County, *Illinois*

My Commission Expires: *October 30, 2018*

Acting in the County of: *DuPage*





**References for Sodium Hypochlorite Bids:**

City of Cedar Rapids  
101 First Street SE  
Cedar Rapids, IA. 52401-1205  
Contact: Diane Rodenkirk, CPPB  
Office: (319) 286-5023  
Fax: (319) 286-5130  
Email: [d.rodenkirk@cedar-rapids.org](mailto:d.rodenkirk@cedar-rapids.org)  
Current three year bid, expires 12/31/17.

Metropolitan Water Reclamation District of Greater Chicago  
100 East Erie Street  
Chicago, IL. 60611-3154  
Contact: Darlene LoCascio,  
Director of Procurement and Materials Management  
Phone: (312) 751-6643  
Email: [Darlene.locascio@mwr.org](mailto:Darlene.locascio@mwr.org)  
Current three year bid, expires 8/4/2018.

Lake County Public Works  
18 North County Street Ninth Floor-Admin  
Waukegan, IL. 60048-4350  
Contact: RuthAnne K. Hall  
Purchasing Agent  
Phone: (847) 984-5889  
Email: [purchasing@lakecountyil.gov](mailto:purchasing@lakecountyil.gov)  
Firm: May 23, 2017 – May 22, 2018



Olin Corporation (Olin) is a Virginia corporation, incorporated in 1892, having its principal executive offices in Clayton, MO. We are a manufacturer concentrated in three business segments: Chlor Alkali Products and Vinyls, Epoxy and Winchester.

The Chlor Alkali Products and Vinyls segment manufactures and sells chlorine and caustic soda, ethylene dichloride and vinyl chloride monomer, methyl chloride, methylene chloride, chloroform, carbon tetrachloride, perchloroethylene, trichloroethylene and vinylidene chloride, hydrochloric acid, hydrogen, sodium hypochlorite products and potassium hydroxide.

The Epoxy segment produces and sells a full range of epoxy materials, including allyl chloride, epichlorohydrin, liquid epoxy resins and downstream products such as converted epoxy resins and additives.

The Winchester segment produces and sells sporting ammunition, reloading components, small caliber military ammunition and components, and industrial cartridges.

In 2012, K.A. Steel was acquired by Olin Corporation; the deal was compelling to both parties, for a number of reasons. Olin is one of the largest manufacturers of caustic soda with production plants spread strategically across North America. KA Steel is one of the largest North American distributors of caustic soda.

Olin sought to diversify into smaller customers with less demand volatility and reduce the layers separating Olin from its end users. Industrial bleach is a strategic growth product for Olin and KA Steel is a key bleach manufacturer with deep roots in the Midwest. KAS complements Olin's existing business with new customers and new geographies; Olin complements KAS' business with new products to sell, expanded security of supply, and the backing of a major corporation. Both KAS and Olin enable the other to be a more reliable supplier.

We, the Supplier of goods, materials, equipment or services covered by this bid or contract will not discriminate in any way in connection with this contract in the employment of persons, or refuse to continue the employment of any person, on account of race, creed, color, sex or national origin of such person.

#### Quality Assurance

Attached are Specification Sheet, SDS, NSF& NAFTA Certification.

490 Stuart Road, N.E. •

Cleveland, Tennessee • 423.336.4870





March 20, 2018

Board of Water & Light  
Mid-Michigan Bulk Water  
Chemicals Consortium 2018  
Cathy Davila, Purchasing & Warehousing Dept.  
1232 Haco Drive  
Lansing, Michigan 48910

Dear Cathy,

As stated in your bid documents below we have listed a couple of exceptions we would like to take with this bid submittal. We understand agreement of these exceptions are based on your review and approval.

**Page 2**

**7. Insurance**

Commercial General Liability Insurance on an **claims made** ~~occurrence~~ basis.

2. ~~SELLER shall purchase insurance from companies acceptable to the PURCHASER.~~

3. **Certificates of insurance, ~~—In the event the respective policies are canceled for any permissible reason, other than for non-payment of premium, Supplier's primary insurer shall endeavor to provide advance notice of cancellation to certificate holder set out in the schedule on file with the carrier.~~ shall state that they will not be canceled nor any changes made, which alters, restricts or reduces the insurance provided or changes the name of the insured, without first giving thirty (30) days' notice in writing to the Corporate Secretary, PURCHASER, 1232 Haco Dr., P.O. Box 13007, Lansing, Michigan 48901. **Our insurance meets your standard of being rated A- or better.****



Page 3

**8. INDEMNITY**

SELLER shall, to the fullest extent allowed by law, defend, indemnify, and hold harmless the PURCHASER, the City of Lansing, their respective officers, agents, employees and insurers against any liability, loss, damage, demand, governmental action, citation, cause of action, or expense of whatever nature (including costs of defense, settlement, court costs and **Reasonable** attorney's fees) which may result from any loss, injury, death, or damage (including environmental harm) allegedly sustained by any person, firm, corporation, or other entity, **remove**( which arises out of or is caused) (*replace with*) **to the extend directly caused** by any act or omission of SELLER its officers, agents, or employees in connection with or in any way arising out of this Contract. SELLER's obligations under this paragraph shall survive the expiration or termination of this Contract.

Page 4

**14. FORCE MAJEURE**

Neither the PURCHASER nor SELLER shall be held responsible for any delay or default caused by fire, act of God, riot, terrorist act, other violent act, war, or flood **accident, labor trouble or shortage, civil disturbance, plant shut down, equipment failure, or voluntary or involuntary compliance with any applicable governmental regulation or order.** where such cause was beyond the delaying or defaulting party's reasonable control. However, SELLER shall make all reasonable efforts to remove or eliminate such a cause of delay or default and shall, upon the cessation of the cause, diligently pursue performance or its obligation under this Contract. SELLER'S management of its plant operations and compliance with regulations, even if they impact SELLER'S ability to meet the contract requirements, do not constitute force majeure. **Bidder shall not be liable for its failure to perform hereunder if due to any shortage or inability to obtain (on terms deemed economically and commercially practicable by Bidder) any equipment or transportation.**

**15. RIGHT TO AUDIT RECORDS**

The PURCHASER shall be entitled to audit the books and records of a SELLER or under any PURCHASER contract or subcontract to the extent that such books, documents, papers and records are pertinent to the performance of such contract or subcontract.

**during normal business hours at a mutually agreed upon date and time.**

The SELLER shall maintain such books and records for a period of three years from the date of final payment under the prime contract for a period of three years from the date of final payment under the subcontract.

## Hours of Service & Contact Phone List

### Customer Service Hours:

MONDAY – FRIDAY 7:00 AM – 5 PM (Central Time)

PHONE# 800.677.8335

FAX # 877.437.2704 or E-MAIL DGcustomerservice@olin.com

### Customer Service Contacts

Christian Rozek	ext 2268	Cell 774-407-3516
Darcy Pier	ext 2255	
Joanne Kampa	ext 2259	
Melissa Essenburg	ext 2332	
Melissa Serritos	ext 2262	
Kris Peterson	ext 2250 Service Mgr.	Cell 630-452-2830

After 5pm during the week, calls will be transferred to the supervisor on duty.

### Weekends

5:00 PM FRIDAY – 7:00 AM MONDAY (CENTRAL TIME)

## 24 hr. Emergency Number/Answering Service 800.677.8335

Please give your name and phone number to the answering service and the on-call supervisor will call you back within 30 minutes.

### Transportation Contacts

Transportation Manager	Greg Manfredini x 2285	630.774.5267 cell
Dispatch Manager	Don Sweeney x 2258	630.842.0722 cell
Regional Dispatch Manager	Marty Ryan x 2322	630.774.6278 cell
Regional Dispatch Manager	Dave Celovsky x 2260	630.774.4572 cell

### Operations Contacts

Director of Operations/Logistics	Lou Canino x 2297	630.774.0548 cell
Operations Manager-Lemont	Justin Biddle x 2271	423.637.6711 cell
N.A. Terminals & Warehousing	Brad Budner x 2279	630.774.5266 cell
Environmental Manager	John Herbert x 2296	630.774.1670 cell



## Request for Taxpayer Identification Number and Certification

Give Form to the  
requester. Do not  
send to the IRS.

▶ Go to [www.irs.gov/FormW9](http://www.irs.gov/FormW9) for instructions and the latest information.

1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank. <b>K A Steel Chemicals Inc</b>	
2 Business name/disregarded entity name, if different from above <b>Olin Chlor Alkali Products &amp; Vinyls</b>	
3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only one of the following seven boxes. <input type="checkbox"/> Individual/sole proprietor or single-member LLC <input checked="" type="checkbox"/> C Corporation <input type="checkbox"/> S Corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Trust/estate <input type="checkbox"/> Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ▶ _____ <b>Note:</b> Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is not disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner. <input type="checkbox"/> Other (see instructions) ▶ _____	4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3): Exempt payee code (if any) _____ Exemption from FATCA reporting code (if any) _____ <small>(Applies to accounts maintained outside the U.S.)</small>
5 Address (number, street, and apt. or suite no.) See instructions. <b>190 Carondelet Plaza #1530</b>	Requester's name and address (optional)
6 City, state, and ZIP code <b>Clayton MO 63105-3467</b>	
7 List account number(s) here (optional)	

Print or type.  
See Specific Instructions on page 3.

### Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

**Note:** If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number													
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### Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

**Certification instructions.** You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

**Sign Here** Signature of U.S. person ▶

Date ▶ 02/28/2018

### General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

**Future developments.** For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to [www.irs.gov/FormW9](http://www.irs.gov/FormW9).

### Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

- Form 1099-INT (interest earned or paid)

- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

*If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding, later.*

# CUSTOMER SPECIFICATION

## Sodium Hypochlorite Solution 12.5%



Customer: Lansing Board of Water & Light  
 Location: LANSING, MI

CHARACTERISTICS	UNITS	MIN	MAX	REPORTED
Sodium Hypochlorite, NaOCl, wt%	wt%	N/A	N/A	X
Density @ 20 C	g/ml	N/A	N/A	X
Available Chlorine, Trade%	wt/vol	15.0	N/A	X
Total Alkalinity as NaOH	wt%	0.1	1.5	X
Total Alkalinity as NaOH, Trade %	wt/vol	N/A	N/A	X

### ADDITIONAL QUALITY REQUIREMENTS

EPA Pesticide Registration Required  
 Certified for the NSF/ANSI-Standard 60 at a maximum use dosage of 84 mg/L  
 Meets the provisions of the American Water Works Association (AWWA)B300-10 Standard

### CUSTOMER DOCUMENT INFORMATION

Customer Material Description: Regular Hypo 15.0% Volume

Arsenic < 3 ppm  
 Heavy Metals < 10 ppm  
 Lead < 10 ppm

### OLIN DOCUMENT INFORMATION

Specification No.: NaOCl-102-11	Revision Number: 0	Issue Date: 12/12/2016	Supersedes:	Review Date: 12/12/2021	Sheet No.: 1 OF 1
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# Certificate of Quality

\*\*\*DUPLICATE\*\*\*



ATTN:

Date Printed: 03/20/2018  
Date Shipped: 01/29/2018  
Date Manufactured: 01/29/2018  
Ship-From:  
K.A. Steel Chemicals  
Olin  
Romulus, MI  
36801 Wabash Street  
ROMULUS MI 48174  
UNITED STATES



Ship-To:

Customer Purchase Order: 59300  
Third Party Purchase Order:

**Material Description:**  
Sodium Hypochlorite Solution 12.5%  
**Inspection Lot:** 3748817

**Customer Product Reference:**  
Regular Hypo 15.5% Volume

Characteristic	Unit	Value	Min	Max
Available Chlorine, Trade%	wt/vol	15.8	15.5	-
Sodium Hypochlorite, NaOCl, wt%	wt%	13.6	-	-
Total Alkalinity as NaOH, Trade %	wt/vol	0.4	-	-
Total Alkalinity as NaOH, wt%	wt%	0.3	0.1	1.5
Density @ 20 C	g/ml	1.217	-	-

This product has been certified according to NSF/ANSI 60 at a maximum use level in drinking water of 84 mg/L.

Product quality information attested by: JOHN HERBERT

Meets the provisions of the American Water Works Association (AWWA) B300-10 Standard

### Olin Document Information

Delivery#: Sales Order: Ship-To #: Material #: Insp. Plan: Grp. Cntr: Route/Carrier: Sheet No:  
-----  
22810339 12792520 90018780 105842 KAS-102 12 KASM/K.A.Steel Chem 1/1





# SAFETY DATA SHEET

OLIN CORPORATION

Product name: Sodium Hypochlorite, 5 - 17%

Issue Date: 03/22/2017

Print Date: 03/23/2017

OLIN CORPORATION encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

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## 1. IDENTIFICATION

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Product name: Sodium Hypochlorite, 5 - 17%

### Recommended use of the chemical and restrictions on use

Identified uses: Disinfectant. Paper bleaching agent Water treatment chemicals Biocidal product Bleaching agents, activators and stabilisers Textile bleaching agent

### COMPANY IDENTIFICATION

OLIN CORPORATION  
190 CARONDELET PLAZA  
CLAYTON MO 63105  
UNITED STATES

Customer Information Number:

+1 844-238-3445  
INFO@OLINBC.com

### EMERGENCY TELEPHONE NUMBER

Local Emergency Contact: 1 800-424-9300

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## 2. HAZARDS IDENTIFICATION

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### Hazard classification

This material is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

Corrosive to metals - Category 1

Skin corrosion - Category 1B

Serious eye damage - Category 1

### Label elements

#### Hazard pictograms



Signal word: **DANGER!**

#### Hazards

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

#### Precautionary statements

##### Prevention

Keep only in original container.  
Wash skin thoroughly after handling.  
Wear protective gloves/ protective clothing/ eye protection/ face protection.

##### Response

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. Immediately call a POISON CENTER/doctor.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.  
Wash contaminated clothing before reuse.  
Absorb spillage to prevent material damage.

##### Storage

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

##### Disposal

Dispose of contents/ container to an approved waste disposal plant.

#### Other hazards

Contact with acids liberates toxic gas.

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

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#### Synonyms: Sodium Hypochloride

This product is a substance.

Component	CASRN	Concentration
Sodium hypochlorite	7681-52-9	>= 5.0 - <= 17.0 %
Water	7732-18-5	>= 83.0 - <= 95.0 %
Sodium hydroxide	1310-73-2	>= 0.1 - <= 4.5 %

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### 4. FIRST AID MEASURES

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#### Description of first aid measures

**General advice:** First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

**Inhalation:** Move person to fresh air; if effects occur, consult a physician.

**Skin contact:** Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing. Seek medical attention if symptoms occur or irritation persists. Wash clothing before reuse. Suitable emergency safety shower facility should be immediately available.

**Eye contact:** - Wash eyes with plenty of water for 15 minutes at least. Do not forget to remove contact lenses. Suitable emergency eye wash facility should be immediately available.

**Ingestion:** Do not induce vomiting. Give one cup (8 ounces or 240 ml) of water or milk if available and transport to a medical facility. Do not give anything by mouth unless the person is fully conscious.

**Most important symptoms and effects, both acute and delayed:** Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

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

**Notes to physician:** May cause asthma-like (reactive airways) symptoms. Bronchodilators, expectorants, antitussives and corticosteroids may be of help. Maintain adequate ventilation and oxygenation of the patient. Chemical eye burns may require extended irrigation. Obtain prompt consultation, preferably from an ophthalmologist. If burn is present, treat as any thermal burn, after decontamination. Due to irritant properties, swallowing may result in burns/ulceration of mouth, stomach and lower gastrointestinal tract with subsequent stricture. Aspiration of vomitus may cause lung injury. Suggest endotracheal/esophageal control if lavage is done. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Repeated excessive exposure may aggravate preexisting lung disease.

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## **5. FIREFIGHTING MEASURES**

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**Suitable extinguishing media:** In case of fire, use water fog, foam, dry powder, carbon dioxide.

**Unsuitable extinguishing media:** Do NOT use water jet. May spread fire. Dry chemical extinguishing agents may react with product; use with caution.

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

**Hazardous combustion products:** During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating.

**Unusual Fire and Explosion Hazards:** No data available

**Advice for firefighters**

**Fire Fighting Procedures:** For safety reasons in case of fire, containers should be stored separately in closed containments. Do not breathe fumes.

**Special protective equipment for firefighters:** Wear full protective clothing and self-contained breathing apparatus.



## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures:** Keep unnecessary and unprotected personnel from entering the area. Wear suitable protective equipment. Avoid breathing vapor. Avoid all contact. Keep people away from and upwind of spill/leak. Wear suitable protective clothing. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection. Ventilate area of leak or spill.

**Environmental precautions:** Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. Do not discharge directly to a water source. See Section 13, Disposal Considerations, for additional information.

**Methods and materials for containment and cleaning up:** Contain spilled material if possible. Small spills: Large spills: Absorb with materials such as: Vermiculite. Cover with absorbent or contain. Collect and dispose. Dike and transfer to suitable and properly labeled containers. This material is corrosive. See SECTION 8, Exposure Controls/Personal Protection, prior to handling.

## 7. HANDLING AND STORAGE

**Precautions for safe handling:** Keep container closed. Do not get in eyes, on skin, or on clothing. Wear personal protective equipment. Use with adequate ventilation. Use good general industrial hygiene practices for handling. Wash thoroughly after handling. Protect from direct exposure to sunlight.

**Conditions for safe storage:** Keep container tightly closed. Store away from incompatible materials. See STABILITY AND REACTIVITY section. Store under cover in a dry, clean, cool, well ventilated place away from sunlight. Store away from oxidizing materials. Store in original vented container.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

Exposure limits are listed below, if they exist.

Component	Regulation	Type of listing	Value/Notation
Sodium hypochlorite	US WEEL	STEL	2 mg/m <sup>3</sup>
Sodium hydroxide	ACGIH	C	2 mg/m <sup>3</sup>
	OSHA Z-1	TWA	2 mg/m <sup>3</sup>
	OSHA P0	C	2 mg/m <sup>3</sup>

### Exposure controls

**Engineering controls:** Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

### Individual protection measures

**Eye/face protection:** Use chemical goggles.

#### Skin protection

**Hand protection:** Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Natural rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl chloride ("PVC" or "vinyl"). Avoid gloves made of: Polyvinyl

alcohol ("PVA"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

**Other protection:** Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task. Reports indicate that sodium hypochlorite can react with various fabrics usually increasing with concentration. Reactions vary significantly depending on strength of chemical, material, fabric treatment and color of dyes. Fire resistant clothing treated cotton has a stronger response than plain cotton. Poly blend fabrics and meta aramid fabric have a weaker response than natural fibers. Contact the Personal Protective Equipment manufacturer for specific information about their products.

**Respiratory protection:** Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions no respiratory protection should be needed; however, if discomfort is experienced, use an approved air-purifying respirator. The following should be effective types of air-purifying respirators: Particulate filter.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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### Appearance

Physical state	liquid
Color	Not available
Odor	pungent
Odor Threshold	No data available
pH	12 - 14
Melting point/range	-20 °C (-4 °F) <i>Literature</i>
Freezing point	-20 °C (-4 °F) <i>Literature</i>
Boiling point (760 mmHg)	No data available
Flash point	Not applicable
Evaporation Rate (Butyl Acetate = 1)	No data available
Flammability (solid, gas)	Not expected to form explosive dust-air mixtures.
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Vapor Pressure	12 mmHg
Relative Vapor Density (air = 1)	Not available
Relative Density (water = 1)	1.082 - 1.275 at 20 °C (68 °F)
Water solubility	completely miscible
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	Not applicable
Decomposition temperature	No data available No test data available

Kinematic Viscosity	No data available
Explosive properties	Not applicable
Oxidizing properties	No information available. Not applicable
Softening point	No data available
Molecular weight	74.5 g/mol
Pour point	No data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

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## 10. STABILITY AND REACTIVITY

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**Reactivity:** No data available

**Chemical stability:** No data available

**Possibility of hazardous reactions:** Polymerization will not occur.

Polymerization will not occur.

Stable under recommended storage conditions.

**Conditions to avoid:** contact with incompatible materials Avoid direct sunlight or ultraviolet sources. Excessive heat. contact between acids and chlorates, a component of this product mixture, can cause the generation of chlorine gas.

**Incompatible materials:** No data available

**Hazardous decomposition products:** Does not decompose.

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## 11. TOXICOLOGICAL INFORMATION

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*Toxicological information appears in this section when such data is available.*

### Acute toxicity

#### Acute oral toxicity

Very low toxicity if swallowed. Swallowing may result in burns of the mouth and throat. Swallowing may result in gastrointestinal irritation or ulceration. May cause nausea and vomiting. May cause abdominal discomfort or diarrhea.

LD50, Rat, > 5,000 mg/kg

#### Acute dermal toxicity

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

LD50, Rabbit, > 5,000 mg/kg

#### Acute inhalation toxicity

Excessive exposure may cause irritation to upper respiratory tract (nose and throat) and lungs.



LC50, Rat, dust/mist, > 10.5 mg/l

**Skin corrosion/irritation**

Brief contact may cause skin burns. Symptoms may include pain, severe local redness and tissue damage.

Prolonged contact may cause severe skin burns. Symptoms may include pain, severe local redness, swelling, and tissue damage.

**Serious eye damage/eye irritation**

May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness. Chemical burns may occur.

**Sensitization**

Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:

No relevant data found.

**Specific Target Organ Systemic Toxicity (Single Exposure)**

Material is corrosive. Material is not classified as a respiratory irritant; however, upper respiratory tract irritation or corrosivity may be expected.

**Specific Target Organ Systemic Toxicity (Repeated Exposure)**

Repeated exposures to dusts of this material are not anticipated to result in systemic toxicity or permanent lung injury; however, excessive exposures may cause less severe respiratory effects.

**Carcinogenicity**

Did not cause cancer in laboratory animals.

**Teratogenicity**

For similar material(s): Has been toxic to the fetus in laboratory animal tests.

**Reproductive toxicity**

For similar material(s): In animal studies, did not interfere with reproduction. In animal studies, did not interfere with fertility.

**Mutagenicity**

In vitro genetic toxicity studies were negative in some cases and positive in other cases. Animal genetic toxicity studies were predominantly negative.

**Aspiration Hazard**

Aspiration into the lungs may occur during ingestion or vomiting, causing tissue damage or lung injury.

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## **12. ECOLOGICAL INFORMATION**

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*Ecotoxicological information appears in this section when such data is available.*

**Toxicity**

**Acute toxicity to fish**

Material is very highly toxic to aquatic organisms on an acute basis (LC50/EC50 <0.1 mg/L in the most sensitive species).

LC50, Pimephales promelas (fathead minnow), 96 Hour, 0.22 - 0.62 mg/l, Method Not Specified.

**Acute toxicity to aquatic invertebrates**

EC50, Daphnia magna (Water flea), flow-through test, 48 Hour, 0.035 mg/l, OECD Test Guideline 202

**Toxicity to bacteria**

EC50, activated sludge, 28.7 mg/l

**Chronic aquatic toxicity**

**Chronic toxicity to fish**

NOEC, Menidia peninsulae (tidewater silverside), flow-through test, 28 d, 0.04 mg/l

**Persistence and degradability**

**Biodegradability:** Biodegradation is not applicable.

**Bioaccumulative potential**

**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3). Partitioning from water to n-octanol is not applicable.

**Mobility in soil**

No relevant data found.

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### 13. DISPOSAL CONSIDERATIONS

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**Disposal methods:** DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Recycler.

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### 14. TRANSPORT INFORMATION

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**DOT**

<b>Proper shipping name</b>	Hypochlorite solutions
<b>UN number</b>	UN 1791
<b>Class</b>	8
<b>Packing group</b>	II
<b>Marine pollutant</b>	Sodium hypochlorite
<b>Reportable Quantity</b>	Sodium hypochlorite, Sodium hydroxide

**Classification for SEA transport (IMO-IMDG):**

Proper shipping name	HYPOCHLORITE SOLUTION
UN number	UN 1791
Class	8
Packing group	II
Marine pollutant	Sodium hypochlorite
Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code	Consult IMO regulations before transporting ocean bulk

**Classification for AIR transport (IATA/ICAO):**

Proper shipping name	Hypochlorite solution
UN number	UN 1791
Class	8
Packing group	II

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

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## 15. REGULATORY INFORMATION

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### Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

Acute Health Hazard  
Chronic Health Hazard

### Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

### Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) Section 103

Components	CASRN	RQ (RCRA Code)
Sodium hypochlorite	7681-52-9	100 lbs RQ
Sodium hydroxide	1310-73-2	1000 lbs RQ

### Pennsylvania Worker and Community Right-To-Know Act:

The following chemicals are listed because of the additional requirements of Pennsylvania law:

Components	CASRN
Sodium hydroxide	1310-73-2
Sodium hypochlorite	7681-52-9

### California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)



This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

#### United States TSCA Inventory (TSCA)

All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

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## 16. OTHER INFORMATION

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### Hazard Rating System

#### NFPA

Health	Fire	Reactivity
3	0	0

### Revision

Identification Number: 1000001223 / A619 / Issue Date: 03/22/2017 / Version: 1.2

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

### Legend

ACGIH	USA. American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLV)
C	Ceiling limit
OSHA P0	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
OSHA Z-1	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
STEL	Short-Term TWA
TWA	8-hour time weighted average
US WEEL	USA. Workplace Environmental Exposure Levels (WEEL)

### Information Source and References

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

OLIN CORPORATION urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.



The Public Health and Safety Organization

## NSF Product and Service Listings

These NSF Official Listings are current as of **Wednesday, March 21, 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=steel+chemicals&>

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

#### K.A. Steel Chemicals, Inc.

1001 31st Street  
Downers Grove, IL 60515  
United States  
800-677-8335  
630-257-3900

**Facility :** Distribution Center - Savannah, GA

#### Sodium Hydroxide

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Caustic 50% Commercial Grade	Corrosion & Scale Control	100mg/L
Caustic 50% Membrane Grade	Corrosion & Scale Control	100mg/L
Dilute Commercial Grade Caustic Soda	Corrosion & Scale Control	100mg/L
Dilute Membrane Grade Caustic Soda	Corrosion & Scale Control	100mg/L

NOTE: Only Listed products bearing the NSF Mark are NSF Certified.

**Facility :** Lemont, IL

#### Hydrochloric Acid

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
18 Baume Hydrochloric Acid	Corrosion & Scale Control	40mg/L
	pH Adjustment	
20 Baume Hydrochloric Acid	Corrosion & Scale Control	40mg/L
	pH Adjustment	
22 Baume Hydrochloric Acid		40mg/L

	Corrosion & Scale Control	
	pH Adjustment	
23 Baume Hydrochloric Acid	Corrosion & Scale Control	40mg/L
	pH Adjustment	
<b>Potassium Hydroxide</b>		
<b>Trade Designation</b>		
Potassium Hydroxide 45% Solution	Corrosion & Scale Control	100mg/L
Potassium Hydroxide 50% Solution	Corrosion & Scale Control	100mg/L
<b>Sodium Hydroxide</b>		
<b>Trade Designation</b>		
Caustic 50% Commercial Grade	Corrosion & Scale Control	100mg/L
Caustic 50% Membrane Grade	Corrosion & Scale Control	100mg/L
Dilute Commercial Grade Caustic Soda	Corrosion & Scale Control	100mg/L
Dilute Membrane Grade Caustic Soda	Corrosion & Scale Control	100mg/L
<b>Sodium Hypochlorite[CL]</b>		
<b>Trade Designation</b>		
Sodium Hypochlorite Solution (10%)	Algicide	115mg/L
	Disinfection & Oxidation	
Sodium Hypochlorite Solution (12.5%)	Disinfection & Oxidation	94mg/L
	Algicide	
Sodium Hypochlorite Solution (15%)	Disinfection & Oxidation	81mg/L
	Algicide	
Sodium Hypochlorite Solution (15.5%)	Disinfection & Oxidation	78mg/L
	Algicide	
Sodium Hypochlorite Solution (16%)	Disinfection & Oxidation	76mg/L
	Algicide	
Sodium Hypochlorite Solution (16.5%)	Disinfection & Oxidation	74mg/L
	Algicide	
Sodium Hypochlorite Solution (18%)	Disinfection & Oxidation	69mg/L
	Algicide	
Sodium Hypochlorite Solution (19%)	Disinfection & Oxidation	66mg/L
	Algicide	
Sodium Hypochlorite Solution (20%)	Disinfection & Oxidation	63mg/L
	Algicide	
Sodium Hypochlorite Solution (5.25%)	Algicide	206mg/L
	Disinfection & Oxidation	
Sodium Hypochlorite Solution (6%)	Algicide	182mg/L
	Disinfection & Oxidation	
Sodium Hypochlorite Solution (8%)	Algicide	140mg/L
	Disinfection & Oxidation	

[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.



**Facility : Sauget, IL****Sodium Hydroxide**

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Caustic 50% Commercial Grade	Corrosion & Scale Control	100mg/L
Caustic 50% Membrane Grade	Corrosion & Scale Control	100mg/L
Dilute Commercial Grade Caustic Soda	Corrosion & Scale Control	100mg/L
Dilute Membrane Grade Caustic Soda	Corrosion & Scale Control	100mg/L

NOTE: Only products bearing the NSF Mark on the product, product packaging, and/or documentation shipped with the product are Certified.

**Facility : Distribution Center - Muscatine, IA****Sodium Hydroxide**

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Caustic 50% Commercial Grade	Corrosion & Scale Control	100mg/L
Caustic 50% Membrane Grade	Corrosion & Scale Control	100mg/L
Dilute Commercial Grade Caustic Soda	Corrosion & Scale Control	100mg/L
Dilute Membrane Grade Caustic Soda	Corrosion & Scale Control	100mg/L

**Sodium Hypochlorite[CL]**

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Sodium Hypochlorite Solution (10%)	Disinfection & Oxidation Algicide	126mg/L
Sodium Hypochlorite Solution (12.5%)	Disinfection & Oxidation Algicide	101mg/L
Sodium Hypochlorite Solution (15%)	Disinfection & Oxidation Algicide	84mg/L
Sodium Hypochlorite Solution (15.5%)	Disinfection & Oxidation Algicide	81mg/L
Sodium Hypochlorite Solution (16%)	Disinfection & Oxidation Algicide	79mg/L
Sodium Hypochlorite Solution (16.5%)	Disinfection & Oxidation Algicide	77mg/L
Sodium Hypochlorite Solution (18%)	Disinfection & Oxidation Algicide	70mg/L
Sodium Hypochlorite Solution (19%)	Disinfection & Oxidation Algicide	66mg/L
Sodium Hypochlorite Solution (5.25%)	Disinfection & Oxidation Algicide	241mg/L
Sodium Hypochlorite Solution (6%)	Disinfection & Oxidation Algicide	211mg/L
Sodium Hypochlorite Solution (8%)	Disinfection & Oxidation Algicide	158mg/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.

**Facility :** Distribution Center - Searsport, ME

**Sodium Hydroxide**

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Caustic 50% Commercial Grade	Corrosion & Scale Control	100mg/L
Caustic 50% Membrane Grade	Corrosion & Scale Control	100mg/L
Dilute Commercial Grade Caustic Soda	Corrosion & Scale Control	100mg/L
Dilute Membrane Grade Caustic Soda	Corrosion & Scale Control	100mg/L

NOTE: Only Listed products bearing the NSF Mark are NSF Certified.

**Facility :** Distribution Center - Baltimore, MD

**Sodium Hydroxide**

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Caustic 50% Commercial Grade	Corrosion & Scale Control	100mg/L
Caustic 50% Membrane Grade	Corrosion & Scale Control	100mg/L
Dilute Commercial Grade Caustic Soda	Corrosion & Scale Control	100mg/L
Dilute Membrane Grade Caustic Soda	Corrosion & Scale Control	100mg/L

NOTE: Only Listed products bearing the NSF Mark are NSF Certified.

**Facility :** Romulus, MI

**Sodium Hypochlorite[CL]**

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Sodium Hypochlorite Solution (10%)	Disinfection & Oxidation Algicide	126mg/L
Sodium Hypochlorite Solution (12.5%)	Disinfection & Oxidation Algicide	101mg/L
Sodium Hypochlorite Solution (15%)	Disinfection & Oxidation Algicide	84mg/L
Sodium Hypochlorite Solution (15.5%)	Disinfection & Oxidation Algicide	81mg/L
Sodium Hypochlorite Solution (16%)	Disinfection & Oxidation Algicide	79mg/L
Sodium Hypochlorite Solution (16.5%)	Disinfection & Oxidation Algicide	77mg/L
Sodium Hypochlorite Solution (18%)	Disinfection & Oxidation Algicide	70mg/L

Sodium Hypochlorite Solution (19%)	Disinfection & Oxidation Algicide	66mg/L
Sodium Hypochlorite Solution (20%)	Disinfection & Oxidation Algicide	63mg/L
Sodium Hypochlorite Solution (5.25%)	Disinfection & Oxidation Algicide	241mg/L
Sodium Hypochlorite Solution (6%)	Disinfection & Oxidation Algicide	211mg/L
Sodium Hypochlorite Solution (8%)	Disinfection & Oxidation Algicide	158mg/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.

**Facility :** Distribution Center - Cannon Falls, MN

**Sodium Hydroxide**

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Caustic 50% Commercial Grade	Corrosion & Scale Control pH Adjustment	100mg/L
Caustic 50% Membrane Grade	Corrosion & Scale Control pH Adjustment	100mg/L
Dilute Commercial Grade Caustic Soda	Corrosion & Scale Control pH Adjustment	100mg/L
Dilute Membrane Grade Caustic Soda	Corrosion & Scale Control pH Adjustment	100mg/L

NOTE: Only products bearing the NSF Mark on the product, product packaging, and/or documentation shipped with the product are Certified.

**Facility :** St. Louis, MO

**Sodium Hydroxide**

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Caustic 50% Commercial Grade	Corrosion & Scale Control	100mg/L
Caustic 50% Membrane Grade	Corrosion & Scale Control	100mg/L
Dilute Commercial Grade Caustic Soda	Corrosion & Scale Control	100mg/L
Dilute Membrane Grade Caustic Soda	Corrosion & Scale Control	100mg/L

**Facility :** Bayonne, NJ

**Sodium Hydroxide**



<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Caustic 50% Commercial Grade	Corrosion & Scale Control	100mg/L
Caustic 50% Membrane Grade	Corrosion & Scale Control	100mg/L
Dilute Commercial Grade Caustic Soda	Corrosion & Scale Control	100mg/L
Dilute Membrane Grade Caustic Soda	Corrosion & Scale Control	100mg/L

NOTE: Only Listed products bearing the NSF Mark are NSF Certified.

**Facility :** Distribution Center - Cincinnati, OH

<b>Sodium Hydroxide</b>		
<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Caustic 50% Commercial Grade	Corrosion & Scale Control	100mg/L
Caustic 50% Membrane Grade	Corrosion & Scale Control	100mg/L
Dilute Commercial Grade Caustic Soda	Corrosion & Scale Control	100mg/L
Dilute Membrane Grade Caustic Soda	Corrosion & Scale Control	100mg/L

NOTE: Only Listed products bearing the NSF Mark are NSF Certified.

**Facility :** Distribution Center - Houston, TX

<b>Potassium Hydroxide</b>		
<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Potassium Hydroxide 45% Solution MB	pH Adjustment	100mg/L
	Corrosion & Scale Control	
Potassium Hydroxide 50% Solution MB	pH Adjustment	100mg/L
	Corrosion & Scale Control	
<b>Sodium Hydroxide</b>		
<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Caustic 50% Commercial Grade	Corrosion & Scale Control	100mg/L
Caustic 50% Membrane Grade	Corrosion & Scale Control	100mg/L
Dilute Commercial Grade Caustic Soda	Corrosion & Scale Control	100mg/L
Dilute Membrane Grade Caustic Soda	Corrosion & Scale Control	100mg/L

NOTE: Only Listed products bearing the NSF Mark are NSF Certified.

**Facility :** Distribution Center - Saginaw, TX

<b>Sodium Hydroxide</b>		
<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Caustic 50% Commercial Grade	Corrosion & Scale Control	100mg/L
	pH Adjustment	
Caustic 50% Membrane Grade		100mg/L

	Corrosion & Scale Control	
	pH Adjustment	
Dilute Commercial Grade Caustic Soda	Corrosion & Scale Control	100mg/L
	pH Adjustment	
Dilute Membrane Grade Caustic Soda	Corrosion & Scale Control	100mg/L
	pH Adjustment	

**Facility :** Distribution Center - Vancouver, WA

**Sodium Hydroxide**

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Caustic 50% Commercial Grade	Corrosion & Scale Control	100mg/L
Caustic 50% Membrane Grade	Corrosion & Scale Control	100mg/L
Dilute Commercial Grade Caustic Soda	Corrosion & Scale Control	100mg/L
Dilute Membrane Grade Caustic Soda	Corrosion & Scale Control	100mg/L

**K.A. Steel Chemicals, Inc.**

15185 Main Street  
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 Lemont, IL 60439  
 United States  
 800-677-8335  
 630-257-3900

**Facility :** Fairborn, OH

**Sodium Hypochlorite[CL]**

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Sodium Hypochlorite Solution (10%)	Algicide	126mg/L
	Disinfection & Oxidation	
Sodium Hypochlorite Solution (12.5%)	Algicide	101mg/L
	Disinfection & Oxidation	
Sodium Hypochlorite Solution (15%)	Algicide	84mg/L
	Disinfection & Oxidation	
Sodium Hypochlorite Solution (15.5%)	Algicide	81mg/L
	Disinfection & Oxidation	
Sodium Hypochlorite Solution (16%)	Algicide	79mg/L
	Disinfection & Oxidation	
Sodium Hypochlorite Solution (16.5%)	Algicide	77mg/L
	Disinfection & Oxidation	
Sodium Hypochlorite Solution (18%)	Algicide	70mg/L
	Disinfection & Oxidation	
Sodium Hypochlorite Solution (19%)	Algicide	66mg/L
	Disinfection & Oxidation	
Sodium Hypochlorite Solution (20%)		63mg/L

Sodium Hypochlorite Solution (5.25%)	Algicide	
	Disinfection & Oxidation	
Sodium Hypochlorite Solution (6%)	Algicide	241mg/L
	Disinfection & Oxidation	
Sodium Hypochlorite Solution (8%)	Algicide	211mg/L
	Disinfection & Oxidation	
	Algicide	158mg/L
	Disinfection & Oxidation	

[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.

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Number of matching Manufacturers is 2

Number of matching Products is 107

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