



2025-2026 Chemical Consortium JCI Jones Chemicals, Inc. Supplier Response

Event Information

Number: 2025-2026 Chemical Consortium
Title: 202503063901
Type: Request for Proposal- Sealed
Issue Date: 3/6/2025
Deadline: 3/20/2025 02:00 PM (ET)
Notes: Notice to Bidders:

Sealed Proposals in response to this Request for Proposal ("RFP") will be received by the Board of Water and Light ("BWL") for furnishing of Mid-Michigan Water Chemical Consortium 2025-2026.

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

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

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

Contact Information

Contact: Monica Clark
Address: 1110 South Pennsylvania Ave.
Lansing, MI 48912

Email: Monica.Clark@LBWL.COM

JCI Jones Chemicals, Inc. Information

Contact: Ashley Ziesmer
Address: 18000 Payne Street
Riverview, MI 48193
Phone: (734) 283-0677
Email: Riverview@JCIChem.com

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

AAshley Ziesmer

Signature

Submitted at 3/19/2025 10:51:00 AM (ET)

AZiesmer@JCIChem.com

Email

Supplier Note

1,000-1,999 gals/del \$3.20/gal 2,000-2999 gals/del \$2.20/gal 3,000-3,999 gals/del \$1.90/gal 4,000-4,499 gals/del \$1.75/gal 4,500+ gals/del \$1.68/gal

Requested Attachments

Exceptions to Terms and Conditions (if applicable)

No response

Other Attachment

Misc Forms.pdf

Sworn and Notarized Affidavit of Compliance

Compled-
Affidavit_of_Compliance.pdf

Bid Attributes

1 Company Contact

Please provide the primary contact's name, e-mail, and phone number for this proposal.

Ashley Ziesmer, AZiesmer@JCIChem.com, (734) 283-0677

2 How many years has your firm been in business under the present ownership?

95 Years.

3 Have you done business with the Board of Water and Light? If so, furnish specifics.

Yes-We have supplied treatment chemicals upon since 2001 or prior.

4 Have you done business with the City of Lansing? If so, furnish specifics.

Yes-We have supplied treatment chemicals upon since 1998 or prior.

5 Have you ever defaulted on a contract or been involved in litigation with the BWL or the City of Lansing? If so, furnish specifics.

No.

6 Have you ever defaulted on a contract or been involved in litigation with any other client in the past five years? If so, furnish specifics.

No.

7	List any relationships between your firm's staff and any current BWL employee. <div style="border: 1px solid black; padding: 2px; min-height: 20px;">None.</div>
8	List at least three (3) references for similar work you have performed for other clients. Include client's name, contact name, title and phone number. <div style="border: 1px solid black; padding: 2px; min-height: 40px;"> *C/O Dearborn 13020 Prospect, Dearborn, MI 48126 (313)706-7567. *Wayne County #5 Pump 797 Central, Wyandotte, MI 48192 (313)213-5243 *Macomb County 23001 Nine Mile Rd., St. Clair Shores, MI 48080 (586)772-3425 </div>
9	List subcontractors that you plan to use on this project. <div style="border: 1px solid black; padding: 2px; min-height: 20px;">None.</div>
10	Indicate any exceptions to the enclosed Terms and Conditions If YES, Contractor must provide red-lined editing on the BWL Terms and Conditions Microsoft Word document only. Any submission of, or general references to Contractor Terms and Conditions in its entirety anywhere within the proposal will invalidate the proposal. <div style="border: 1px solid black; padding: 2px; min-height: 20px;">No</div>
11	Acknowledgment of receipt of any Addendas issued. <div style="border: 1px solid black; padding: 2px; min-height: 20px;">Yes</div>
12	Confirm you have reviewed all attachments included in this solicitation. <input checked="" type="checkbox"/> Yes
13	I have read and agreed. <p>The Bidder states that this proposal is made in conformity with the Proposal Documents and agrees that, in the event of any discrepancies or differences between any conditions of their proposal and the Proposal Documents provided in the Instructions to Bidders and completed by the bidder, the provisions of the latter shall prevail. No verbal or written agreements or understandings considered or entered into prior to signing of a contract in the form of a purchase order, shall be binding after the signing of the contract unless incorporated in the contract.</p> <p>The Bidder certifies that this proposal is made in good faith, upon the best information, with knowledge and accuracy, and without collusion or connection with any other person or persons submitting proposals for the work.</p> <input checked="" type="checkbox"/> I have read and agreed

Bid Lines

1	Sodium Hypochlorite (per gallon) Quantity: <u> 1 </u> UOM: <u> GAL </u> Price: <div style="border: 1px solid black; padding: 2px; text-align: right;">\$1.68</div> Total: <div style="border: 1px solid black; padding: 2px; text-align: right;">\$1.68</div> Manufacturer: <div style="border: 1px solid black; padding: 2px;">JCI Jones Chemicals, Inc.</div> Manufacturer #: <div style="border: 1px solid black; padding: 2px;">0</div> Supplier Notes: <div style="border: 1px solid black; padding: 2px;">1,000-1,999 gals/del \$3.20/gal 2,000-2999 gals/del \$2.20/gal 3,000-3,999 gals/del \$1.90/gal 4,000-4,499 gals/del \$1.75/gal 4,500+ gals/del \$1.68/gal</div>		
2	Sodium Hypochlorite Demurrage (first 4 hours free) Quantity: <u> 1 </u> UOM: <u> HR </u> Manufacturer: <div style="border: 1px solid black; padding: 2px;">No response</div> Manufacturer #: <div style="border: 1px solid black; padding: 2px;">No response</div>		

No Bid

3	Hydrofluosilic Acid- 40,000 lbs. minimum shipments	
	Quantity: <u> 1 </u> UOM: <u> TON </u>	No Bid
	Manufacturer: <u> No response </u>	
	Manufacturer #: <u> No response </u>	

4	Hydrofluosilic Acid- 30,000 lbs. minimum shipments	
	Quantity: <u> 1 </u> UOM: <u> TON </u>	No Bid
	Manufacturer: <u> No response </u>	
	Manufacturer #: <u> No response </u>	

5	Hydrofluosilic Acid- multiple locations in 40,000 lbs. minimum shipments	
	Quantity: <u> 1 </u> UOM: <u> TON </u>	No Bid
	Manufacturer: <u> No response </u>	
	Manufacturer #: <u> No response </u>	

6	Hydrofluosilic Acid- Demurrage (first 4 hours free)	
	Quantity: <u> 1 </u> UOM: <u> HR </u>	No Bid
	Manufacturer: <u> No response </u>	
	Manufacturer #: <u> No response </u>	

7	Ferric Chloride- Dry Tons	
	Quantity: <u> 1 </u> UOM: <u> TON </u>	No Bid
	Manufacturer: <u> No response </u>	
	Manufacturer #: <u> No response </u>	

8	Ferric Chloride-Demurrage (first 4 hours free)	
	Quantity: <u> 1 </u> UOM: <u> EA </u>	No Bid
	Manufacturer: <u> No response </u>	
	Manufacturer #: <u> No response </u>	

9	Pebble Quicklime	
	Quantity: <u> 1 </u> UOM: <u> TON </u>	No Bid
	Manufacturer: <u> No response </u>	
	Manufacturer #: <u> No response </u>	

10	Pebble Quicklime- Demurrage (first 4 hours free)	No Bid
	Quantity: <u> 1 </u> UOM: <u> HR </u>	
	Manufacturer: <u>No response</u>	
	Manufacturer #: <u>No response</u>	
11	Soda Ash	No Bid
	Quantity: <u> 1 </u> UOM: <u> TON </u>	
	Manufacturer: <u>No response</u>	
	Manufacturer #: <u>No response</u>	
12	Soda Ash- Demurrage (first 4 hours free)	No Bid
	Quantity: <u> 1 </u> UOM: <u> HR </u>	
	Manufacturer: <u>No response</u>	
	Manufacturer #: <u>No response</u>	

Response Total: \$1.68

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

Specifically, the undersigned, owner or authorized officer of JCI JONES CHEMICALS, INC. (the Bidder) attests it does not fall within the following definition of a "Iran linked business" under the Iran Economic Sanctions Act:

MCL 129.312 (e) of the Act provides:

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

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

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

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

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

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

BIDDER JCI JONES CHEMICALS, INC.


By: ASHLEY ZIESMER

Its: OFFICE MANAGER

Date: MARCH 19, 2025

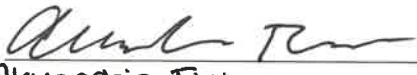
STATE OF MICHIGAN)

COUNTY OF WAYNE)

This instrument was acknowledged before me on the 19 day of March, 2025, by
Ashley Ziesmer



ALEXANDRIA FISHER
My Commission Expires
March 15, 2031
County of Wayne
Acting in the County of Wayne


Alexandria Fisher, Notary Public

Wayne County, Michigan My
Commission Expires: 3-15-2031 Acting
in the County of: Wayne



**JCI Jones Chemicals, Inc.
Consent to Shareholder Action**

January 23, 2025

I, the undersigned shareholder, being the holder of all shares of stock of the above company now outstanding, hereby resolve as follows:

1. **Ashley Ziesmer**, Office Manager
2. **Keith Gore**, Branch Manager

are hereby authorized to submit and sign bids, contracts and other documents pertaining thereto of this Corporation, to municipalities and other for the sale of company products.

A handwritten signature in blue ink, appearing to read "J. Jones", is written above a horizontal line.

Jeffrey W. Jones, C.E.O. & President

Attest:

A handwritten signature in blue ink, appearing to read "Summer Mello", is written above a horizontal line.

Summer Mello, Vice President



Payment Instructions: ACH and Wire

BANK: Bank OZK
8300 Douglas Ave- Suite 810
Dallas, TX 75225
Ray Dunavant: (214) 750-4800

BENEFICIARY: JCI Jones Chemicals Inc

ACCOUNT #: 2804444623

ACCOUNT TYPE: Checking

ACH ROUTING #: 082907273

WIRE ROUTING #: 082907273

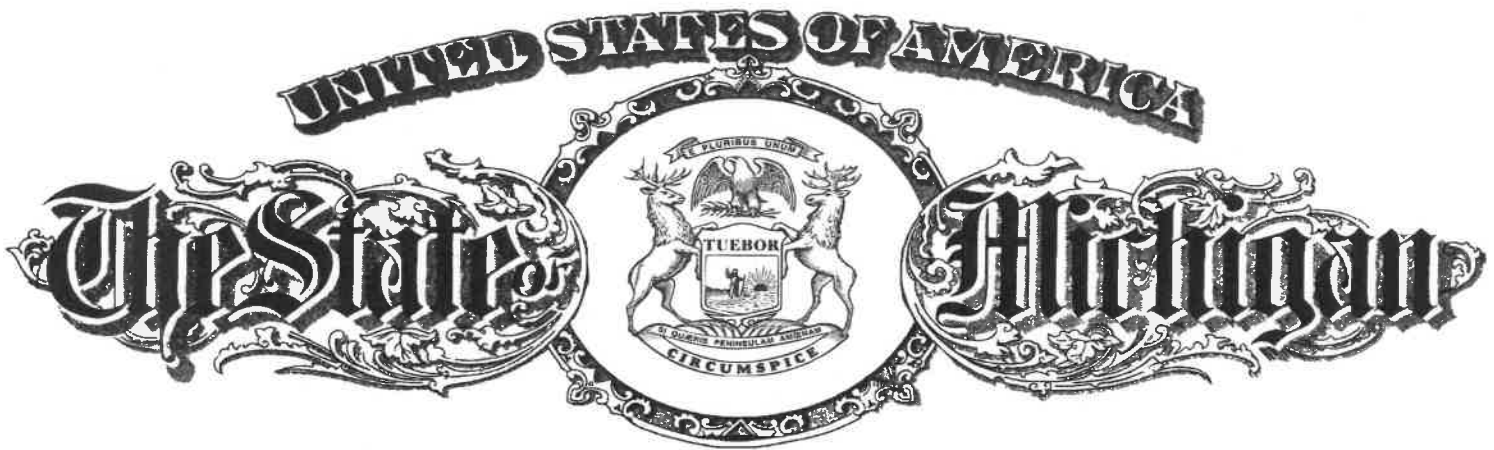
Please email payment remittance advice to ar@jcichem.com.

Should you have any questions please contact our Accounts Receivable department using the email address above.

Thank you!

JCI Jones Chemicals, Inc

Corporate Offices • 1765 Ringling Blvd. • Sarasota, Florida 34236 • telephone: 941.330.1537 • facsimile: 941.330.9657 • 800.477.1078
Branch Locations • Warwick, NY • Caledonia, NY • Barberton, OH • Riverview, MI • Merrimack, NH • Charlotte, NC
Jacksonville, FL • Beech Grove, IN • Milford, VA • Tacoma, WA • Torrance, CA
www.jcichemicals.com



Department of Licensing and Regulatory Affairs

Lansing, Michigan

This is to Certify That

JCI JONES CHEMICALS, INC.

*a(n) New York FOREIGN PROFIT CORPORATION,
was validly authorized on June 18 , 1993 to transact business in Michigan, and that said corporation
holds a valid certificate of authority to transact business in this state.*

*This certificate is issued pursuant to the provisions of 1972 PA 284 to attest to the fact that the corporation is
in good standing in Michigan as of this date and is duly authorized to transact in this state any business set
forth in its application which a domestic corporation formed under this act may lawfully conduct.*

*This certificate is in due form, made by me as the proper officer, and is entitled to have full faith and credit
given it in every court and office within the United States.*



Sent by electronic transmission

Certificate Number: 25030054308

*In testimony whereof, I have hereunto set my hand,
in the City of Lansing, this 4th day of March , 2025.*

Linda Clegg, Director

Corporations, Securities & Commercial Licensing Bureau

CERTIFICATE OF COMPLIANCE

Certificate Number 20140416-MH18026
Report Reference MH18026-20020829
Issue Date 2014-APRIL-16

Issued to: JCI JONES CHEMICALS INC
1765 RINGLING BLVD
SARASOTA FL 34236



This is to certify that
representative samples of DRINKING WATER TREATMENT CHEMICALS
Sunny Sol® 150", "Sunny Sol® 100 Plus",
Sunny Sol® 100", "Sunny Sol® Bleach

Have been investigated by UL in accordance with the
Standard(s) indicated on this Certificate.

Standard(s) for Safety: NSF/ANSI 60 - Drinking Water Treatment Chemicals -
Health Effects

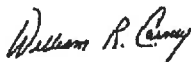
Additional Information: See the UL Online Certifications Directory at
www.ul.com/database for additional information

Only those products bearing the UL Classification Mark for the U.S. and Canada should be considered as being covered by UL's Classification and Follow-Up Service and meeting the appropriate U.S. and Canadian requirements.

The UL Classification Mark includes: the UL in a circle symbol:  with the word "CLASSIFIED" (as shown); a control number (may be alphanumeric) assigned by UL; a statement to indicate the extent of UL's evaluation of the product; and the product category name (product identity) as indicated in the appropriate UL Directory. The UL Classification Mark for Canada includes: the UL Classification Mark for Canada:  with the word "CLASSIFIED" (as shown); a control number (may be alphanumeric) assigned by UL; a statement to indicate the extent of UL's evaluation of the product; and the product category name (product identity) in English, French, or English/French as indicated in the appropriate UL Directory.

Look for the UL Classification Mark on the product.

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.



William R. Casey, Director, North American Certification Programs
UL LLC

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact a local UL Customer Service Representative at www.ul.com/customer-service





AFFIDAVIT OF COMPLIANCE

SODIUM HYPOCHLORITE

JCI Jones Chemicals, Inc. hereby guarantees that the sodium hypochlorite solution comprising each shipment or other delivery made to the buyer complies with all applicable requirements of the AWWA Standard for Hypochlorites, AWWA B300-10.

We believe the above certification holds true until such a time as the AWWA Standard for Hypochlorites is amended or the above certification is revoked in writing.

In addition, this product is certified under the ANSI/NSF Standard 60.

Very truly yours,

JCI JONES CHEMICALS, INC.

Ashley Ziesmer

Ashley Ziesmer
Office Manager

JCI JONES CHEMICALS, INC.
Product Specification
Sunny Sol® 150 (FILTERED)

SPECIFICATION

	<u>MINIMUM</u>	<u>TYPICAL</u>	<u>MAXIMUM</u>
<u>Sodium Hypochlorite</u>			
Weight Percent	12.5 ¹	14.0	15.6
<u>Excess Sodium Hydroxide</u>			
Weight Percent	0.1	0.6	2.0
Grams/Liter	1.2	7.7	25.0
<u>Available Chlorine</u>			
Weight Percent	11.9	13.3	14.8
Trade (Volume) Percent	14.2	16.1	18.5
Grams/Liter	142	161.4	185
Specific Gravity @ 68°F (20°C)	1.196	1.211	1.249
Weight of Solution @ 68°F (20°C)	10.0	10.1	10.4
<u>Inert Ingredients</u>			<u>MAXIMUM</u>
Sodium Carbonate	Na ₂ CO ₃		0.5% wt
Sodium Chloride	NaCl		12.5% wt
<u>Metals</u>			<u>MAXIMUM</u>
Arsenic	As		<0.500 mg/L
Barium	Ba		<0.050 mg/L
Cadmium	Cd		<0.050 mg/L
Chromium	Cr		<0.050 mg/L
Cobalt	Co		<0.050 mg/L
Copper	Cu		<0.050 mg/L
Iron	Fe		<0.050 mg/L
Manganese	Mn		<0.050 mg/L
Nickel	Ni		<0.050 mg/L
Selenium	Se		<0.500 mg/L
Silver	Ag		<0.050 mg/L
Mercury	Hg		<0.005 mg/L

NOTE: Always read and follow the product label and Safety Data Sheet (SDS).

(Continued on next page)

JCI JONES CHEMICALS, INC.
Product Specification
Sunny Sol® 150 (FILTERED)

Description

This product is a water solution of sodium hypochlorite. Inert ingredients, other than water and salt, include trace metallic and inorganic salt contaminants from raw materials and natural decomposition products. This product is registered with the USEPA (EPA Registration Number: 1744-20001), has USDA approvals 3D, B1, D2, L1 and Q4, meets ANSI/AWWA Standard B300-10, meets the FDA requirements of 21 CFR 178.1010, and meets the requirements of ANSI/NSF Standard 60 (Maximum Use Level: 80 mg/L).

This specification is based on registration requirements, mathematical calculation and historical product variability. JCI Jones Chemicals, Inc. does not make any expressed or implied warranty that future production will demonstrate or continue to possess typical properties.



SAFETY DATA SHEET



RESPONSIBLE CARE®
OUR COMMITMENT TO SUSTAINABILITY

1. Identification

Product identifier Sunny Sol® 150

Other means of identification

SDS number 1201001

Synonyms Sodium Hypochlorite Solution, Bleach.

Recommended use Disinfection of Drinking Water, Sewage & Wastewater Effluent Treatment, Swimming Pool Water Disinfection. Please contact JCI Jones Chemicals, Inc. for additional recommended uses.

Recommended restrictions None known.

Company name JCI Jones Chemicals, Inc.

Address 1765 Ringling Boulevard
Sarasota, FL 34236

General Information

Telephone (800) 477-1078

Website www.jcichem.com

Emergency phone number CHEMTREC
US: 1-800-424-9300 Canada: 1-800-567-7455

2. Hazard(s) identification

Physical hazards Corrosive to metals Category 1

Health hazards Skin corrosion/irritation Category 1
Serious eye damage/eye irritation Category 1
Specific target organ toxicity, single exposure Category 3 respiratory tract irritation

Environmental hazards Hazardous to the aquatic environment, acute hazard Category 1
Hazardous to the aquatic environment, long-term hazard Category 2

OSHA defined hazards Not classified.

Label elements



Signal word Danger

Hazard statement May be corrosive to metals. Causes severe skin burns and eye damage. May cause respiratory irritation. Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Precautionary statement

Prevention Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe mist or vapor. Use only outdoors or in a well-ventilated area. Wash thoroughly after handling. Keep only in original container. Avoid release to the environment.

Response If swallowed: Rinse mouth. Do NOT induce vomiting. If inhaled: Remove person to fresh air and keep comfortable for breathing. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. 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. Collect spillage.

Storage Store in a well-ventilated place. Keep container tightly closed. Store locked up. Store in corrosive resistant container with a resistant inner liner.

Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	
	Contact with acids liberates toxic gas.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Sodium hypochlorite	7681-52-9	12.5 - 15.6
Sodium hydroxide	1310-73-2	0.1 - 2.0

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Take off immediately all contaminated clothing. Wash off IMMEDIATELY with plenty of water for at least 15-20 minutes. Get medical attention immediately. Wash contaminated clothing before reuse. Call a physician or poison control center immediately.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Most important symptoms/effects, acute and delayed	Corrosive effects. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
Indication of immediate medical attention and special treatment needed	Treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. With eye exposure, continue flushing during transport to hospital.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire. Do not use dry extinguishing media that contains ammonium compounds.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Wear appropriate personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Absorb spillage to prevent material damage. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see Section 8 of the SDS.
Methods and materials for containment and cleaning up	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
Environmental precautions	Never return spills in original containers for re-use. For waste disposal, see Section 13 of the SDS. Do not discharge into drains, water courses or onto the ground. Environmental manager must be informed of all major releases.

7. Handling and storage

Precautions for safe handling	Wear appropriate personal protective equipment. Do not get in eyes, on skin, on clothing. Use with adequate ventilation. Observe good industrial hygiene practices. Do not apply heat or direct sunlight. Temperature and product concentration affect product quality and decomposition rates.
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Conditions for safe storage,
including any incompatibilities

Keep container tightly closed. Store in a cool and well-ventilated place. Store in a corrosive resistant container. Consult container manufacturer for additional guidance. Store away from and do not mix with incompatible materials such as acids, oxidizers, organics, reducing agents, and all metals except titanium.

8. Exposure controls/personal protection

Occupational exposure limits

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

Components	Type	Value
Sodium hydroxide (CAS 1310-73-2)	PEL	2 mg/m ³

US. ACGIH Threshold Limit Values

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

US. NIOSH: Pocket Guide to Chemical Hazards

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

US. Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value
Sodium hypochlorite (CAS 7681-52-9)	STEL	2 mg/m ³

Biological limit values

Appropriate engineering controls

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

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

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles) and a face shield. Wear a full-face respirator, if needed.

Skin protection

Hand protection

Wear appropriate chemical resistant gloves.

Other

Wear appropriate chemical resistant clothing. 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. FRC 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

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

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

9. Physical and chemical properties

Appearance

Physical state

Liquid.

Form

Liquid.

Color

Not available.

Odor

Pungent.

Odor threshold

0.9 mg/m³

pH

12 - 14 (25 °C/77 °F)

Melting point/freezing point

-11 °F (-24 °C) (12.5% solution)

Initial boiling point and boiling range

Not available.

Flash point

Not applicable

Evaporation rate	No data available
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not applicable
Flammability limit - upper (%)	Not applicable
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	12 mm Hg (20°C/68°F)
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Completely miscible
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not applicable
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Bulk density	Not applicable
Molecular formula	NaOCl
Molecular weight	74.5 g/mol

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Contact with incompatible materials. Avoid ultraviolet (UV) light sources. Excessive heat. Reacts violently with strong acids. Acid contact will produce chlorine gas. Amine contact will produce chloramines.
Incompatible materials	Strong oxidizing agents. Acids. Metals. Organic compounds. Ammonia.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Ingestion	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Ingestion may produce burns to the lips, oral cavity, upper airway, esophagus and possibly the digestive tract.
Inhalation	Vapors and spray mist may irritate throat and respiratory system and cause coughing.
Skin contact	Causes skin burns.
Eye contact	Causes eye burns.

Symptoms related to the physical, chemical and toxicological characteristics	Corrosive effects. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
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Information on toxicological effects

Acute toxicity.	Occupational exposure to the substance or mixture may cause adverse effects.
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Product	Species	Test Results
Sodium Hypochlorite, 5 - 17% (CAS Mixture)		
Acute		
Dermal		
LD50	Rabbit	> 2 g/kg
Oral		
LD50	Rat	3 - 5 g/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Causes severe skin burns and eye damage.
Serious eye damage/eye irritation	Causes serious eye damage.
Respiratory or skin sensitization	
Respiratory sensitization	No data available.
Skin sensitization	No data available.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
IARC Monographs. Overall Evaluation of Carcinogenicity	
Sodium hypochlorite (CAS 7681-52-9)	3 Not classifiable as to carcinogenicity to humans.
Reproductive toxicity	No data available.
Specific target organ toxicity - single exposure	May cause respiratory irritation.
Specific target organ toxicity - repeated exposure	No data available.
Aspiration hazard	Not classified, however droplets of the product may be aspirated into the lungs through ingestion or vomiting and may cause a serious chemical pneumonia.
Chronic effects	Prolonged or repeated overexposure causes lung damage.
Further information	Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Product	Species		Test Results
Sodium Hypochlorite, 5 - 17% (CAS Mixture)			
Aquatic			
Crustacea	LC50	Daphnia	1 mg/l
Fish	LC50	Bluegill (Lepomis macrochirus)	0.6 mg/l, 48 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	No data available for this product.
Mobility in soil	Not available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

UN number	UN1791
UN proper shipping name	Hypochlorite solutions
Transport hazard class(es)	
Class	8
Subsidiary risk	7
Packing group	III
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	IB3, N34, T4, TP2, TP24

Packaging exceptions	154
Packaging non bulk	203
Packaging bulk	241

IATA

UN number	UN1791
UN proper shipping name	Hypochlorite solution
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Label(s)	8
Packing group	III
Environmental hazards	Yes
ERG Code	8L

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number	UN1791
UN proper shipping name	HYPOCHLORITE SOLUTION
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Label(s)	8
Packing group	III
Environmental hazards	

Marine pollutant	Yes
EmS	F-A, S-B

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to
Annex II of MARPOL 73/78 and
the IBC Code

15. Regulatory information

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

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

Not regulated.

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

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

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

Superfund Amendments and Reauthorization Act of 1986 (SARA)

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

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical	Yes
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SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

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

Not regulated.

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

Not regulated.

Safe Drinking Water Act (SDWA)	Not regulated.
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US state regulations

US. Massachusetts RTK - Substance List

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

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

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

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

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

US. Rhode Island RTK

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

US. California Proposition 65

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

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

Not listed.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

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

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

USEPA Registration Number 1744-20001

ANSI/NSF Standard 60 Certified Maximum Use Level: 80 mg/L

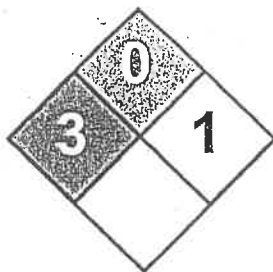
AWWA Standard AWWA B300-10

USDA Authorized Uses 3D, B1, D2, L1, Q4

Issue Date December 1, 2014

Revision Date N/A

NFPA Ratings



List of abbreviations

LD50: Lethal Dose, 50%.
LC50: Lethal Concentration, 50%.
EC50: Effective concentration, 50%.
TWA: Time weighted average.

References

EPA: AQUIRE database
HSDB® - Hazardous Substances Data Bank
US. IARC Monographs on Occupational Exposures to Chemical Agents
IARC Monographs. Overall Evaluation of Carcinogenicity
ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices
Olin Chlor Alkali Products Safety Data Sheet

Disclaimer

This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.