

REQUEST FOR PROPOSALS

for

**Water Treatment Services
RFP 19-049**

EUGENE PUBLIC SCHOOLS
LANE COUNTY SCHOOL DISTRICT NO. 4J
EUGENE, OREGON

Proposal Due Date and Time: Thursday, May 9, 2019, 2:00 PM
Location: Facilities Management Offices
715 W. 4th Avenue, Eugene, OR

Contact: Belinda Wilton
Telephone: 541-790-7414

Mailing Address: Eugene School District No. 4J
Purchasing
715 W 4th Avenue
Eugene, OR 97402

FAXED/EMAIL PROPOSALS NOT ACCEPTED

CALL FOR SEALED PROPOSALS

NOTICE IS HEREBY GIVEN that sealed proposals will be accepted for the following items and services by Belinda Wilton, Purchasing Office, Eugene School District No. 4J. Information regarding specifications may be secured from the Facilities Purchasing Office, Eugene School District No. 4J, 715 W. 4th Avenue, Eugene, Oregon 97402. Phone: 541-790-7416

Materials/Service:	Date:	Time:	Location:
Water Treatment Sevices	May 9, 2019	2:00PM	Facilities Management 715 W 4 th Ave, Eugene

Beginning April 8, 2019 Proposers may obtain RFP documents at the following hyperlink: <http://www.4j.lane.edu/bids/>. **Hard copies are not provided by the School District.**

It shall be the responsibility of all Proposers to obtain RFP Documents and any and all Addenda from the hyperlink.

Proposals must be received by the date and time indicated above at Facilities Management, Eugene School District 4J, 715 West 4th Avenue, Eugene, Oregon 97402-5024 Attn: Belinda Wilton. Proposals received after the designated time and date will be returned unopened.

Proposers are required to certify non-discrimination in employment practices, and identify resident status as defined in ORS 279A.120.

Pre-qualification of proposers is not required. All proposers are required to comply with the provisions of Oregon Revised Statutes and the District Board Policy. Attention is directed to ORS 244, Government Ethics; ORS 279A and 279B, Public Contracts and Purchasing and State of Oregon Department of Justice Attorney General's Model Public Contract Rules Manual.

School District 4J reserves the right:

- (1) to reject any or all proposals not in compliance with public proposal procedures.
- (2) to postpone award of the contract for a period not to exceed ninety (90) days from date of proposal opening.
- (3) to waive informalities in the proposal.
- (4) to select the proposal which appears to be in the best interest of the District.
- (5) to cancel the procurement.

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For more information or for clarification of any part of this RFP, including Technical Specifications, the District point of contact is Belinda Wilton, Facilities Management, Eugene School District No. 4J, 715 W 4th Ave, Eugene OR, 97402, Telephone (541) 790-7414 OR FAX (541) 790-7404. Questions must be emailed to: wilton@4j.lane.edu and must be submitted NO LATER THAN April 30, 2018. No oral questions will be accepted.

**PART 1
STATEMENT OF WORK**

1. PURPOSE

The Eugene School District wishes to establish a contract with a vendor to provide water testing and treatment services. The chemical products required for treatment shall be provided by the treatment services contractor. This proposal requests proposed costs, materials, and methods to provide corrosion protection of the all the districts hydronic and steam heating systems, one chilled water system, and water quality chemicals for three rainwater harvesting systems, Vendors are encouraged to propose whatever unique package(s) of treatment services, chemicals, and equipment arrangements they may offer.

The contract is for the remainder of the 2018/2019 and entire 2019-20 school years with possible extensions of up to 4 years. After the 2019-20 school year, the District reserves the right to negotiate extension of the contract for up to 4 years, or issue another RFP or RFQ, whatever is deemed in the best interest of the District.

2. SCOPE OF WORK

Generally the scope includes regular testing water conditions in the hvac systems of the buildings within the District, and appropriately treating the water in those systems. Systems requiring testing and treating include:

- a. Steam heating boilers, montly testing/treatment, and including annual testing of condensate systems.
- b. Closed-loop hot water heating systems, Closed-loop two-pipe heating/chilled water systems, one dedicated closed-loop chilled water system (no tower loop however). 4 times per year testing/treatment.
- c. Four rainwater harvesting treatement systems, three of which use a chemical injection pump, the fourth uses UV light (so no chemicals). 4 times per year testing/verifying treatment is working. Provide chemical to district to treat underground cistern tank during summer months (up to 60,000 gallons of collected rainwater).

All HVAC systems shall be tested and brought up to proper chemical levels by October 1 each year, and maintained through May 31. The rainwater systems shall be tested and brought to proper levels by August 10th each year. The contract will be based on 9 equal monthly billings for work occurring roughly from September 15 to May 31. The last treatment of the year will include wet layup of steam boiler systems that do not have internal inspections scheduled for the summer.

If contract is extended for future years, target dates shall follow the same pattern.

The successful proposer will be expected to provide regular testing and maintenance of appropriate levels of chemicals, and submit reports of testing results, chemicals added, makeup water used since last service date, and note any unusual conditions observed in the boiler room (leaks, unusual volume of make-up water, water-logged expansion tanks, etc.) while performing water treatment services.

Steam systems are to be tested and treated (and chemical pump feed rate adjusted if required) at least monthly. Condensate systems should be tested at least once during the school year, during mid heating season. Closed loop systems are to be tested and treated (if required) at a minimum of 4 times during the heating season: by October 1st, once in December/January, once in Feb/March, and once in May/June prior to layup in June. Rainwater harvesting system operation shall be inspected on the same schedule as closed loop hvac systems. All rainwater harvesting systems are located at sites with closed loop HVAC systems.

The water treatment contractor shall be responsible to distribute chemical containers (preferably 5 gal but no larger than 15 gal) to each site requiring treatment for boilers and rainwater systems. Contractor shall also be responsible for disposing of any empty containers into the school's on-site dumpster. Chemical may be dropped shipped to each site if the receiving and transporting of the chemical container(s) to the boiler room can be safely done by custodial staff without any special training or equipment. Otherwise, chemical shall be delivered to Facilities Management and distribution of containers to sites shall be the responsibility of the water treatment contractor.

The water treatment staff proposed for the district are required to pass a criminal background check process prior to performing work at school sites. Furthermore the staff proposed to the district are considered key staff and are not allowed to be changed without approval from 4J facilities manager for the replacement or supplemental staff involved. The purpose of this is to ensure continuity and to have coverage from someone with history of performing this service at our sites. We may ask for references of any replacement or supplemental staff to assist in this evaluation process.

3. BACKGROUND INFORMATION

The district wishes to continue using Sodium Nitrite-based products for protection of its steam boilers. Most steam boilers are not operated on evenings or weekends; hence oxygen scavenging based protection has not worked as well as nitrite-based products with filming amines. All closed-loop HVAC systems are to continue using Molybdenum-based protection. Rainwater harvesting systems use a combination of chlorine-based chemical injection and bag filters. MSDS sheets for products currently in use are provided in the appendix.

There are 10 sites with steam systems within the District (see appendix). Of the 10 steam boiler sites, 3 sites have a single boiler (Bailey Hill, Edison, and Twin Oaks), and the remaining 6 sites have two boilers each. At two of the steam boiler sites (Monroe and South Eugene HS), steam from the boilers is used to serve convertors, which in turn, serve closed-loop hot water systems in all (Monroe) or part (SEHS) of the building.

All steam systems are low-pressure systems. No process steam is used anywhere within the District. Make-up water is metered at all sites. Chemical feed pumps have been installed at all of the steam system sites. Typically a single chemical pump has been set up to cycle on whenever the school's condensate receiver's return pump cycles on, injecting chemical into the condensate receiver pump discharge line. At the two high schools with steam heating, each of two boilers is set up with its own feedwater pump. In those cases, there is a chemical pump associated with each boiler and the chemical pump cycles on with its respective feedwater pump.

There are 24 sites with closed-loop hot water systems within the District (see appendix). One of the closed loop sites (McCornack) has three independent closed loop systems. Eight of the district's newest buildings utilize 2-pipe heating/cooling systems where the loop water is either routed through the boilers, or through the chiller, depending on time of year and building loads. One older building (Awbrey Park elem) has both a closed-loop heating system and a closed loop chilled water system. There is no cooling tower or condenser water at this site because air-cooled condensing units are used.

4. INSPECTION OF SITES:

A walkthrough of two or three representative sites will be conducted Tuesday, April 16, 2019, meeting first at Facilities Management offices, 715 W. 4th Avenue, Eugene, OR 97402, at 10:30 am.

PART 2
PROPOSAL SUBMITTAL PROCEDURES

1. GENERAL

- A. The term "vendor" or "proposer" shall refer to the firm or individual submitting a proposal.
- B. All proposals must be submitted utilizing the pages provided herein for that purpose.
- C. Proposer may submit a proposal on any or all items as given in the specifications and/or any single item.
- D. Proposals shall have arrived (by mail or hand delivery) within the time specified herein. FAX (facsimile) proposals are unacceptable. Delivery is the sole responsibility of the Proposer.
- E. By submitting a proposal, the proposer certifies that the proposal has been arrived at independently and has been submitted without any collusion designed to limit competition.
- F. Prices entered in the pricing section shall represent the proposer's net price per month after all trade and cash discounts have been considered. Furthermore the pricing submitted in proposal and invoicing needs to be broken down to per site for accounting purposes.
- G. The proposal submitted shall be signed in ink by a representative of the company authorized to bind the firm. Alterations or erasures shall be initialed in ink by the firm representative signing the document.
- H. The District is not liable for any cost incurred by a proposer prior to issue of a contract.

2. PROPOSAL SUBMITTAL

2 copies of the proposal and all amendments must be signed and submitted by 2:00 PM, Thursday May 9, 2019 to Belinda Wilton, Facilities Purchasing, Eugene School District No. 4J, 715 W 4th Avenue, Eugene, Oregon 97402. Each proposal must be submitted in a sealed opaque envelope and designated as "Proposal: Water Treatment Services". The name and address of the proposer must appear on the outside of the envelope. An electronic copy of the submission in .pdf format shall be sent to wilton@4j.lane.edu or provided with the response on a compact disk (CD) or a USB Flash Drive ("thumbdrive"). The Hard Copy **MUST BE SUBMITTED AND RECEIVED** at the specified office location by the deadline to meet submission requirements. The electronic submission **DOES NOT MEET** submission requirements. In accordance with OAR 137-047-0450, the District confirms only the names of each Propser will be read aloud at a public opening.

Proposal is to include all required information to address items listed in this solicitation and is requested to be submitted in hard copy and electronic copy.

- A. Hard Copy/Paper
 - a. One (1) complete original, signed in ink
 - b. One (1) copy of the proposal
 - c. Printed with a font size no small than 10 point on 8-1/2 x 11 size paper
 - d. Elaborate art work, expensive paper, and expensive visuals are not necessary
- B. Electronic
 - a. E-mail files as noted below to wilton@4j.lane.edu or include files in original submission on compact disk (CD) or a USB Flash Drive ("thumb drive")
 - b. One (1) complete copy preferred in one file, but no more than three files
 - c. Unless otherwise noted above, proposals files should be submitted in PDF format

3. PROPOSAL FORMAT

Responses should be clear and concise. To provide consistency in the review of the bids, firms are requested to prepare their bids in the format specified below.

Title Page

Proposer should identify the Request for Proposals, name of firm, address, telephone number, fax number, name and title of contact person, and date of submission.

Response to Scope of RFP

Provide cost of treatment services including chemicals for the remainder of 2019-20 fiscal year (through June 30, 2019) and next fiscal year, with possible extension of contract for each of the four subsequent years.

Provide four water treatment reports as example reports for steam and four for closed loop systems. These should be of similar scope to those outlined in this proposal for services.

References

Provide names, addresses, contact names, telephone numbers and e-mail addresses of at least three organizations or individuals for which similar work was performed.

Proposers shall indicate the office or nearest city for any non-office based staff of the service technicians and support staff. This will be used in local preference portion of evaluation.

All submitted materials will be reviewed confidentially by the evaluation committee and will not be available to the general public.

HARD COPY IS THE OFFICIAL SUBMISSION AND MUST MEET LISTED DEADLINE TO BE CONSIDERED

4. INQUIRIES

Questions or comments regarding this Request for Proposals or related technical issues should be directed in writing to the attention of Belinda Wilton, Facilities Management, 715 W. 4th Avenue, Eugene OR, 97402 541-541-790-7414, email : wilton@4j.lane.edu. No oral questions will be accepted.

5. OPPORTUNITY TO COMMENT

Firms interested in formally commenting on this RFP, or addressing any area(s) in which they believe competition is unduly inhibited, may submit a signed written statement to Purchasing/Proposal, 715 W. 4th Ave, Eugene, OR 97402 or email : wilton@4j.lane.edu. Comments must be received by 5:00 p.m. ten (10) working days before opening.

The protest of these specifications may be done in accordance with Model Public Contracting Rules, Section 137-047-0730. The potential proposer has ten (10) days prior to the proposal opening date to submit its protest. No protest against award because of the content of specifications or contract terms shall be considered after this deadline.

6. ADDENDA

Addenda, if any, will be issued anytime up until three (3) calendar days prior to the proposal due date. To ensure adequate receipt of addenda, verify that the District has the name, phone number and email of a contact person for the firm.

7. ALTERNATE PROPOSAL

Where the product or service is not as specified, the proposal must clearly be marked **"alternative proposal"**, a sample supplied where appropriate, and/or a clear specification of the substitute must be provided, in order for it to be considered a competitive proposal. The District Board or its representative's decision of the acceptability of alternates is final.

8. PROVISIONS

By submittal of this proposal, the vendor agrees to comply with the provisions of the Oregon Attorney General's Model Public Contract Rules Manual as adopted by the District Board policy. Attention is directed to the latest version of the following provisions. Full copies of any provision may be obtained from the District for the minimal cost of reproduction or from the Department of Justice, Salem Oregon.

OREGON REVISED STATUTES

**ORS 244
ORS 279A, 279B**

**GOVERNMENT ETHICS
PUBLIC CONTRACTS AND PURCHASING**

OREGON ADMINISTRATIVE RULES

**CHAPTER 137
Divisions 046, 047**

PUBLIC PROCUREMENT RULES

9. EQUAL EMPLOYMENT COMPLIANCE REQUIREMENT (in accordance with ORS 279A.100-279A.110).

By submitting this proposal, the vendor certifies conformance to the applicable federal acts, executive orders, and Oregon statutes and regulations concerning affirmative action toward equal employment opportunities. All information and reports required by the federal or Oregon state governments having responsibility for the enforcement of such laws shall be supplied to the District in compliance with such acts, regulation, and orders.

10. FOREIGN CONTRACTORS

The attention of all contractors who are not domiciled in or registered to do business in the state of Oregon is called to Oregon Revised Statute 279A.120(2)(a)(b)(3).

(1) "In all public contracts, the public contracting agency shall prefer goods or services that have been manufactured or produced in this state if price, fitness, availability and quality are otherwise equal."

(2) "When a public contract is awarded to a foreign contractor and the contract price exceeds \$10,000, the contractor shall promptly report to the Department of Revenue on forms to be provided by the Department of Revenue the total price, terms of payment, length of contract, and such other information as the Department of Revenue may require before final payment can be received on the public contract. The public contracting agency shall satisfy itself that the requirement of this subsection has been complied with before it issues a final payment on a public contract. For purposes of this subsection, a foreign vendor is one who is not domiciled in or registered to do business in the State of Oregon."

**PART 3
PROPOSAL EVALUATION PROCEDURES**

1. PROPOSAL REJECTION

The District reserves the right:

- A. to reject any or all proposals not in compliance with all public procedures and requirements.
- B. to reject any proposal(s) not meeting the specifications set forth here in.
- C. to waive any or all irregularities in proposals submitted.
- D. to consider the competency of proposers in making any award.
- E. to follow the provisions of Section 137-046-0300 of the Oregon Attorney General's Model Public Contract Manual, in the event two or more proposals are for the same amount for the same work.
- F. to reject all proposals.
- G. to award any or all parts of any proposal.
- H. to request references and other data to determine responsiveness.
- I. to award any or all parts of a solicitation.

2. SELECTION AND EVALUATION PROCESS

Evaluation will be done by an evaluation committee consisting of various District technical and administrative staff.

3. EVALUATION FACTORS

Points will be awarded as follows:

- | | |
|---|-----------------|
| a. Price for 12 month contract | 50 points |
| b. Proposal format and company history | 10 points |
| b. Format of example reports provided | 20 points |
| c. Reference Check | 15 points |
| d. Local company office or staff (within 60 miles of 97402) | <u>5 points</u> |
| Total | 100 points |

4. PROPOSAL VALIDITY PERIOD

Each proposal shall be irrevocable for a period of ninety (90) days from the Proposal Opening Date.

5. COMPETENCY OF VENDOR

To enable the District to evaluate the competency and financial stability of a vendor, the qualifying and accepted vendor(s) shall, upon request, furnish such information as reasonably necessary.

6. BRAND NAME

Manufacturer's names and/or brand names used in these specifications are for the purpose of identification and a basis for quality, and do not expressly or implicitly require or in any way limit what brands may be used. Unless the vendor states otherwise, it is understood that proposals are submitted on the exact specifications as described in the proposal.

7. PROTEST OF AWARD

In accordance with Oregon Model Contract Rules Manual Section 137-047-0740 any adversely affected Proposer has seven (7) calendar days from the date of the written notice of award to file a written protest.

8. RESERVATION IN EVALUATION

If the District receives offers identical in price, fitness, availability and quality, and chooses to award a contract, the District shall award the contract in accordance with Oregon Model Contract Rules Manual Section 137-046-0300.

PART 4
CONTRACT GENERAL TERMS AND CONDITIONS

1. GENERAL REQUIREMENTS

All proposers are required to comply with the provisions of Oregon Attorney General's Model Public Contract Rules, and the District Board Policy. The District reserves the right to reject any and all proposals received as a result of this request for proposal, or to negotiate separately with any source whatsoever in any manner necessary to serve the best interest of the District. The contents of the proposal of the successful vendor(s) will become the contractual obligation, if a contract ensues. Failure of the successful vendor(s) to accept these obligations may result in cancellation of the award. The selected vendor(s) will be required to assume responsibility for all services offered in their proposal whether or not produced by them. Further, the vendor will notify the District of the designated person who will be the sole point of contact with regard to contractual matters, including payment of any and all charges resulting from the contract.

2. ORDINANCES, PERMITS, LICENSES

The contractor shall keep fully informed of local ordinances, state and federal laws in any manner affecting the work herein specified. The proposer shall comply with said ordinances, laws, regulations, and protect and indemnify the District, its officers, and agents against any claim or liability arising from, or based upon, the violations of any such laws, ordinances, or regulations.

All permits, licenses, and inspection fees necessary for the manufacture and delivery of the requested items shall be secured and paid for by the proposer.

3. WAIVER OF PROVISIONS

Contractor agrees that the waiver, acceptance, or failure by the District to enforce any provisions, terms or conditions of this contract shall not operate or be construed as a waiver of prior or subsequent breaches or the right of the District to thereafter enforce such provisions.

4. TERMINATION

4.1 For Default. This contract may be terminated by either party upon not less than seven (7) calendar days written notice should the other party fail substantially to perform in accordance with the terms and/or conditions of this contract or any supplements thereof. If Selected Proposer defaults by failing to perform any of the obligations of the contract or becomes insolvent or is declared bankrupt or commits any act of bankruptcy or insolvency or makes an assignment for the benefit of creditors, the District may terminate the contract, and at the District's option, obtain performance of the work elsewhere. If the contract is terminated for default, Selected Proposer shall not be entitled to receive any further payments under the contract until all work called for has been fully performed. Any extra cost or damage to the District resulting from such default(s) shall be deducted from any money due or coming due to Selected Proposer. Selected Proposer shall bear any extra expenses incurred by the District in completing the work, including all increased costs for completing the work, and all damage sustained, or which the District by reason of such default may sustain.

4.2 For Public Convenience. This contract may also be terminated by the District in the event that the project is permanently abandoned, as determined in the sole discretion of the District. The District may terminate the contract in whole or in part whenever the District determines, in its sole discretion that such termination is in the interests of the District. Whenever the contract is terminated in accordance with this paragraph, the vendor(s) shall be entitled to payment for actual work performed at unit contract prices for completed items of work. An equitable adjustment in the contract price for partially completed items of work will be made, but such adjustment shall not include provision for loss of anticipated profit on deleted or uncompleted work. Termination of this contract by the District at any time during the term, whether for default or convenience, shall not constitute a breach of contract by the District.

5. CONTRACT BREACH

In the event of a breach by the proposer of any of the provisions of this contract, the District reserves the right to cancel and terminate this contract forthwith upon giving oral or written notice to the contractor.

6. DAMAGES

The proposer shall be liable for any damage to the District resulting from his refusal or failure to complete the work under this contract. Damages shall be those actually incurred and include the cost to obtain the contracted work elsewhere.

7. HOLD-HARMLESS AND INDEMNIFICATION

To the fullest extent of the law, the proposer will defend, indemnify, hold harmless and reimburse the District, its officers, board members, agents, and employees, from all claims, demands, suits, actions, penalties, damage expenses or liability of any kind including attorney's fees. To the extent that death or bodily injury to persons or damage to property arises out of the fault of the proposer, the proposer's indemnity obligation exists only to the extent it contributed to or caused such damage, whether or not such are contributed to or caused in any part by the District.

8. INSURANCE

The proposer shall maintain in force for the duration of this agreement a Professional Liability insurance policy shall be maintained for not less than \$3,000,000 per occurrence and \$5,000,000 in the aggregate, an Umbrella Insurance policy with limits not less than \$3,000,000, a Commercial General Liability, Automobile Liability (owned, non-owned and hired) Insurance policy(s) written on an occurrence basis with limits not less than \$2,000,000 per occurrence and \$3,000,000 in the aggregate naming the District, its employees, officials and agents as an additional insured as respect to work or services performed under this agreement. This insurance will be primary to any insurance the District may carry on its own.

Evidence of the above coverage issued by a company satisfactory to the District shall be provided to the District by way of a certificate of insurance before any work or services commence. A 30 day notice of cancellation or material change in coverage clause shall be included. Failure to maintain the proper insurance shall be grounds for immediate termination of this contract.

Workers' Compensation: The proposer shall provide and maintain workers' compensation coverage for its employees, officers, agents, or partners as required by applicable workers' compensation laws. The proposer shall provide a certificate of insurance to the District as evidence of coverage containing a 30 day notice of cancellation clause.

Equipment and Material: The proposer shall be responsible for any loss, damage, or destruction of its own property, equipment, and materials used in connection with the work.

Subcontractors: The proposer shall require all subcontractors to provide and maintain general liability, auto liability, professional liability (as applicable), and workers' compensation insurance with coverages equivalent to those required of the general proposer in this contract. The proposer shall require certificates of insurance from all subcontractors as evidence of coverage.

Exception or Waivers: Any exception or waiver of these requirements shall be subject to review and approval from the District.

9. COPYRIGHTS

The proposer agrees to protect the District against all claims, suits, or proceedings for patent, trademark, copyright, or franchise infringement arising from the purchase herein. The proposer further agrees to assume all expenses and damages arising from such claims, suits, or proceedings.

10. LIENS, CLAIMS, OR ENCUMBRANCES

The proposer warrants and represents that all the goods and materials contained herein are free and clear of all liens, claims, or encumbrances of any kind whatsoever.

11. DELIVERY INFORMATION

Delivery shall be on any working day (Monday through Friday except holidays) as defined in the RFP. All deliveries are FOB DESTINATION, unless otherwise stated. The proposer agrees to bear all risks of loss,

injury, or destruction of goods and materials ordered herein which occur prior to delivery and such loss, injury or, destruction shall not release the proposer from any obligation under this contract. No charges will be allowed for handling which includes, but is not limited to, packaging, wrapping, bags, containers, or reels, etc., unless specifically stated hereon.

12. DEFECTIVE ITEMS

The Proposer agrees to accept for credit, repair, or replacement, at no charge, any items received defective by the District or proven defective during the agreed warranty period, and to be responsible for ALL TRANSPORTATION costs for return thereof to the Proposer and, when repaired or replaced, the return thereof to the District. Any rejection of goods or materials, whether held by the District or returned, will be at the vendor's risk and expense.

13. DELIVERABLES

All goods or materials purchased herein are subject to the approval of the District. Any rejections of materials or services, whether held by the District or returned, will be at the proposer's risk and expense. All invoices and/or documents affecting this contract shall contain the applicable purchase order number. Pursuant to this contract, packing lists indicating the content therein shall be enclosed with each and every shipment.

14. TIME OF DELIVERY

All deliveries are to be made according to the delivery schedule stated herein. No exception to the delivery schedule shall be allowed unless prior written approval is first obtained from the District Purchasing Department. Time of delivery is of the essence and the District reserves the right to cancel any undelivered portion of any order for failure to deliver on time. Any failure of delivery may be considered a breach of this contract and damages calculated according to the provisions of this contract.

15. REPRESENTATIONS AND WARRANTY

AUTHORITY; BINDING OBLIGATION. Contractor represents and warrants that (i) Contractor has the power and authority to enter into and perform the Contract; and (ii) the Contract, when executed and delivered, shall be a valid and binding obligation of Contractor enforceable in accordance with its terms.

WARRANTY ON SERVICE STANDARDS. Contractor represents and warrants that: (i) Contractor shall perform all Services in accordance with the highest applicable professional and/or industry standards using only materials and workmanship of first quality; (ii) Contractor shall at all times during the term of the Contract utilize only personnel to perform the Services who are qualified, competent, licensed and certified; (iii) at all times during this Contract, Contractor shall be qualified, competent and current with any necessary licenses to perform the Services; and (iv) all subcontractors, if any are authorized and have been paid in full prior to Contractor's receipt of payment under the Contract.

16. CONTRACT PAYMENTS

All payments to the proposer shall be remitted through the District's normal accounts payable procedures and schedules. Furthermore, the provisions or moneys due under this contract shall not be assignable. In the event that the District is entitled to a cash discount, the period of computation shall commence on the date of delivery, or receipt of correctly completed invoices, whichever is LATER. If an adjustment in payment is necessary due to damage, the cash discount period shall commence on the date final approval for payment is authorized. As a prerequisite, invoices must reflect agreed upon list price and extension. **All invoices shall be sent to Eugene School District No. 4J, Attention: Accounts Payable, 200 N Monroe, Eugene OR, 97402.**

17. WITHHOLDING PAYMENT

In the event the District determines that Selected Proposer has failed to perform any obligation under this contract within the times set forth in this contract, then the District may withhold from amounts otherwise due and payable to Selected Proposer the amount determined by the District as necessary to cure the default, until the District determines that such failure to perform has been cured. Withholding under this clause shall not be deemed a breach entitling Selected Proposer to termination or damages, provided that the District promptly gives notice in writing to Selected Proposer of the nature of the

default or failure to perform, and in no case more than ten (10) days after it determines to withhold amounts otherwise due.

18. RIGHT TO AUDIT

The District reserves the right to audit, at reasonable times and places, the books and records of any proposer who has submitted cost or pricing data according to the terms of a contract, to the extent that such books and records relate to such cost or pricing data. Any vendor who receives a contract, for which cost or pricing data are required, shall maintain such books and records that relate to such cost or pricing data for three (3) years from the date of final payment under the contract.

19. PRICING

During the period of the contract, the District reserves the right to perform a spot market analysis to ensure competitive prices are obtained. As part of this analysis, the District can go elsewhere for an item or items if a lower price can be obtained. The proposer has a pre-emptive right to honor the lower price for this item if it wishes.

Prior to the end of a contract year, if a contract extension is available, the District will perform an annual review of the program to determine if the program has performed successfully. If the review results are successful, the District will offer a one year extension to the contract. Renewal periods are the only opportunity for price increases. Pricing for services should increase no more than the US Urban Consumer Price Index annually. Any price increase over the US Urban Consumer CPI shall be justified in writing with documents supporting the reason for the increase. Any price decreases experienced during the contract period shall be passed on to the District immediately.

20. DISTRICT PERSONNEL

No officer, agent, consultant, or employee of the District shall be permitted any interest in the contract.

21. CONTRACT ALTERATIONS

No alteration in any of the terms, conditions, time, delivery, price, quality, quantities, or specifications will be effective without the prior WRITTEN consent of Purchasing.

22. ORDER OF PRECEDENT

In the event of ambiguity, preference shall be in this order: Statement of Work, General Terms and Conditions, the solicitation document, then the proposal document. For discrepancies between this contract and the Oregon Attorney General's Model Public Contract Rules Manual, preference shall be given first to Board Policy then the Rules Manual.

23. OTHER GOVERNMENT AGENCIES

Pursuant to ORS 279A.215 "Permissive Cooperative Procurements" other government agencies shall have the power to establish contracts under the terms, conditions, and prices of the original contract if the Selected Proposer (contractor) agrees. No material change may be made in any terms, conditions, or pricing from those established in the original contract between the District and Selected Proposer.

24. NON-DISCRIMINATION CLAUSE

The Proposer agrees not to discriminate against any client, employee or applicant for employment or for services, because of race, color, religion, sex, national origin, physical or mental handicap, sexual orientation or age unless based upon bona fide occupational qualifications with regard to, but not limited to, the following: employment up-grading, demotion or transfer; recruitment or recruitment advertising; layoffs or termination; rates of pay or other forms of compensation; selection for training; and/or rendition of services. It is further understood that any vendor who is in violation of this clause shall be barred forthwith from receiving awards of any purchase order from the District, unless a satisfactory showing is made that discriminatory practices have terminated and that a recurrence of such acts is unlikely.

25. PROVISIONS BY REFERENCE

The following provisions of the Oregon Revised Statutes are conditions or clauses of this text and incorporated by reference. Copies of the full text are available upon request.

279B.220 CONDITIONS OF PUBLIC CONTRACTS CONCERNING PAYMENT OF LABORERS AND MATERIALMEN, CONTRIBUTIONS TO INDUSTRIAL ACCIDENT FUND, LIENS AND WITHHOLDING TAXES

279B.235 CONDITIONS CONCERNING HOURS OF LABOR

279B.230 CONDITIONS CONCERNING PAYMENT FOR MEDICAL CARE AND PROVIDING WORKERS' COMPENSATION

26. HAZARDOUS MATERIALS

Orders will not be accepted if they contain any hazardous materials and arrive without labeling and safety data sheets (SDS, essentially similar to Form OSHA 20) meeting Oregon Administrative Rule 437-Division 2, Subdivision Z, Appendix C and D.

27. RECYCLABLE PRODUCTS

Vendors shall use recyclable products to the maximum extent economically feasible in the performance of the contract work set forth in this document (ORS 279B.270(2)). Preference for the purchase of recycled materials shall be in accordance with ORS 279A.125.

28. USE OF TABACCO PRODUCTS

Smoking and the other use of tobacco products is prohibited on all District property, pursuant to OAR 581- 021-0110.

29. FINGERPRINTING

All individuals with whom a Contractor/Business contracts, or any employee, agent or subcontractor of a Contractor must undergo a preliminary background check with the District. Individuals who will have direct, unsupervised contact with students shall also be required to submit fingerprints and to undergo a state and nationwide fingerprinting and criminal history records check pursuant to ORS 326.603 and ORS 326.607. The Oregon Department of Education provides such fingerprinting services for Contractors. Individuals, or the Contractor, and not the District, shall be responsible for the fees associated with fingerprinting and the criminal history records check, not to exceed the actual cost.

Note: ODE charges \$59 for the background check and there is an additional \$12.50 fee to have fingerprints completed for the background check.

<http://www.4j.lane.edu/hr/icbackgroundprocess/>

30. INDEPENDENT CONTRACTOR

The Proposer is an independent contractor, not an agent of the District, and nothing in this relationship shall be construed as creating a partnership, joint venture, franchise, agency, or employment relationship between the Proposer and the District. Neither the Proposer nor the District shall have the authority to make any statements, representations, nor commitments of any kind or to take any action binding the other except as provided for herein or authorized in writing by the party being bound

31. DISPUTE RESOLUTION

31.1 Litigation. Any claim, action, suit, or proceeding (collectively, "Claim") between the District and Selected Proposer that arises from or relates to this contract shall be brought and conducted solely and exclusively within the Circuit Court of Lane County for the State of Oregon; provided, however, if a Claim must be brought in a federal forum, then it shall be brought and conducted solely and exclusively within the United States District Court for District of Oregon. In no event shall this section be construed as a waiver by the District of any form of defense or immunity, whether sovereign immunity, governmental immunity, immunity based on the eleventh amendment to the Constitution of the United States or otherwise, from any claim or from the jurisdiction of any court. **SELECTED PROPOSER BY EXECUTION OF THIS CONTRACT HEREBY CONSENTS TO THE IN PERSONAM JURISDICTION OF THE COURTS REFERENCED IN THIS SECTION 31.1.**

31.2 Governing Law. This contract shall be governed by and construed in accordance with the laws of the State of Oregon without regard to principles of conflict of laws.

32. DEBARMENT CERTIFICATION

The Contractor certifies that the Contractor is not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in this Contract by any Federal department or agency. If requested by the School District, the Contractor shall complete a Certification Regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion form. Any such form completed by the Contractor for this Contract shall be incorporated into this Contract by reference.

33. TAXES

The District is tax exempt. All taxes shall be the responsibility of the Proposer.

34. NON-APPROPRIATION OF FUNDS

If the District's legislative body or other funding authority does not appropriate funds for contract payment for contract year or any subsequent appropriation period and District does not otherwise have funds available to lawfully pay the contract payments ("Non-Appropriation Event") District may, subject to the conditions herein and upon prior written notice to Proposer ("Non-Appropriation Notice"), effective 60 days after the later of Proposer's receipt of same or the end of the District's appropriation period ("Non-Appropriation Date"), terminate the contract and be released of its obligation to make all contract payments due after the Non-Appropriation Date. As a condition to exercising its right under this addendum, District shall: (1) provide in the Non-Appropriation Notice a certification of responsible official that the Non-Appropriation Event has occurred, and (2) pay Proposer all sums payable to Proposer under the contract for services received, excluding termination fees, up to the Non-Appropriation Date.

**PART 5
CERTIFICATIONS**

NON-DISCRIMINANT CLAUSE

Proposer agrees not to discriminate against any client, employee or applicant for employment or for services because of race, color, religion, sex, national origin, physical or mental handicap, sexual orientation or age unless based upon bona fide occupational qualifications with regard to, but not limited to, the following: employment upgrading; demotion or transfer; recruitment or recruitment advertising; layoffs or termination; rates of pay or other forms of compensation; selection for training; and/or rendition of services. It is further understood that any Proposer who is in violation of this clause shall be barred from receiving awards of any Purchase Order from the District, unless a satisfactory showing is made that discriminatory practices have terminated and that a recurrence of such acts is unlikely.

Legal Name of Proposer: _____

Doing Business As (if applicable): _____

Address: _____

Officer's Signature: _____

Print Officer's Name and Title: _____

RESIDENT CERTIFICATE

Please Check One:

_____ Resident Proposer: Proposer has paid unemployment taxes or income taxes in this state during the last twelve calendar months immediately preceding the submission of this proposal, has a business address in this state and has stated in this proposal whether Proposer is a "resident bidder" under ORS 279A.120(1)(b).

OR

_____ Non-Resident Proposer: Proposer does not qualify under requirements stated above.

Please specify your state of residence: _____

Officer's Signature: _____ Date: _____

Print Officer's Name and Title: _____

PART 6
SIGNATURE PAGE
----- RFP 19-049 Water Treatment Services -----
LANE COUNTY SCHOOL DISTRICT NO. 4J

The undersigned proposes to furnish all supplies or perform all work as listed in the Statement of Work, for the price(s) stated; and that all articles supplied under any resultant contract will conform to the specifications herein, to be fit and sufficient for the purpose manufactured, merchantable, of good material, workmanship and free from defect.

The undersigned agrees to be bound by all applicable laws and regulations, the accompanying specifications, and by the District policies and regulations.

The undersigned, by submitting an offer, represents that:

- A. The Proposer has read and understands the specifications and any drawings or attachments and the proposal is made in accordance herewith.
- B. The offer is based upon the materials, equipment, and systems required by the specifications unless otherwise noted. Failure to comply with the specifications or any terms of this RFP may disqualify the vendor as being non-responsive.

The undersigned certifies that the offer has been arrived at by the vendor independently and has been submitted without any collusion designed to limit independent competition.

The undersigned certifies that he has received and duly considered all addenda to the specifications and that all costs associated with all addenda have been included in this offer:

Addenda: No. _____ to No. _____ inclusive.

We therefore offer and make this offer on furnishing the requested equipment and/or services at the prices indicated herein in fulfillment of the specifications of Lane County School District No. 4J.

Name of Firm: _____

Doing Business As (if applicable): _____

Address: _____

Telephone: _____ FAX Number: _____

Federal ID Number: _____ URL Address: _____

E-Mail Address: _____

Officer's Signature: _____ Date: _____

Type or Print Officer's Name: _____

Eugene School District 4J Systems requiring water treatment

Closed Loop Systems

As of 2019

Site
1 ATA/Jefferson
2 Adams
3 Awbrey Park Awbrey Park, CW
4 Cal Young
5 Camas Ridge/Harris
6 Chavez
7 Churchill
8 Coburg
9 Ed Center
10 Gilham
11 Holt
12 Howard
13 Kelly
14 Kennedy
15 Madison
16 McCornack, north McCornack, middle McCornack, south
17 Monroe
18 River Road
19 Roosevelt
20 Sheldon
21 South Eugene
22 Spring Creek
23 Willagillespie
24 Willard, main

24 sites to visit to test/treat 27 different closed loop systems

5 visits per year:
 Sept/Oct
 Nov/Dec
 Jan/Feb
 Mar/Apr
 May/Jun/Jul

Steam Systems

As of 2019

Site	Number of Boilers
Bailey Hill	1
Edison	1
Facilities	2
Meadowlark (Buena Vista)	2
Monroe	2
North Eugene	2
Parker (Charlemagne)	2
South Eugene	2
Silver Lea (Corridor/Yujin G)	2
Twin Oaks	1

10 sites to visit to test/treat 17 different steam boilers

9 visits per year sept-May, last visit may be in May or June and should include summer layup if applicable.

Rain Water Harvesting Systems

As of 2019

Site
ATA/Jefferson
Howard
River Road
Roosevelt

BOILER LOG FORM

SCHOOL:				BOILER #:				MONTH:			YEAR:		SIGNATURE:							
TIME	DATE	OUTSIDE TEMP	BOILER RM TEMP	BOILER WATER TEMP	BOILER WATER / STEAM PRESSURE	STACK TEMP	MAX STACK TEMP	BOTTOM BLOW DOWN	LOW WATER BLOW DOWN	SITE GLASS BLOW DOWN	OIL LINE VAC. #1	OIL LINE VAC. #2	HOUR METER READING	HOURS RUN	WATER METER READING	GALLONS USED	GALLONS DIESEL	AIR COM	COMMENTS	
	1																			
	2																			
	3																			
	4																			
	5																			
	6																			
	7																			
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	31																			

Safety Data Sheet CHEM-AQUA 16585

Supersedes Date 10/08/2014

Issuing Date 04/11/2017

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name CHEM-AQUA 16585
Recommended use Water treatment chemical
Information on Manufacturer
CHEM-AQUA, INC
BOX 152170
IRVING, TEXAS 75015

Product Code 0748
Chemical nature Aqueous solution
Emergency Telephone Number
CHEMTREC® 800-424-9300
Telephone inquiry
972-579-2477

2. HAZARD IDENTIFICATION

Color Light yellow

Physical state Liquid

Odor Sweet

GHS Classification

Physical Hazards

Corrosive to metals

Category 1

Health Hazard

Acute Oral Toxicity

Category 4

Skin Corrosion/Irritation

Category 1

Serious Eye Damage/Eye Irritation

Category 1

Other hazards

None

Labeling

Signal Word

DANGER



Hazard statements

H314 - Causes severe skin burns and eye damage

H302 - Harmful if swallowed

H290 - May be corrosive to metals

Precautionary Statements

P280 - Wear protective gloves, protective clothing, eye protection and face protection.

P264 - Wash face, hands and any exposed skin thoroughly after handling.

P260 - Do not breathe mist.

P270 - Do not eat, drink or smoke when using this product.

P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing.

Rinse skin with water or shower.

P363 - Wash contaminated clothing before reuse.

P332 + P313 - If skin irritation occurs, get medical attention.

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

P310 - Immediately call a physician.

P304 + P340 - IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.

P342 + P311 - If experiencing respiratory symptoms, call a physician.

P301 + P330 + P331 - IF SWALLOWED: Rinse mouth. DO NOT induce vomiting. Call a physician if unwell.

P390 - Absorb spillage to prevent damage.

P406 - Store in a corrosion-resistant container.

P501 - Dispose of contents and container in accordance with applicable local regulations.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS No.	Weight %
Sodium nitrite	7632-00-0	10-30
Sodium hydroxide	1310-73-2	1-5

*The exact percentage (concentration) of composition has been withheld as a trade secret

4. FIRST AID MEASURES

General advice	Do not get in eyes, on skin or on clothing. Do not breathe mist.
Eye Contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention immediately.
Skin Contact	Remove immediately all contaminated clothing. Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately.
Inhalation	Move to fresh air. In case of shortness of breath, give oxygen. If breathing has stopped, apply artificial respiration. Get medical attention immediately.
Ingestion	Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention immediately. Never give anything by mouth to an unconscious person. Rinse mouth.
Notes to physician	The product causes burns of eyes, skin and mucous membranes. Control of circulatory system, shock therapy if needed.

5. FIRE-FIGHTING MEASURES

Flash Point > 201 °F / > 94 °C	Method Seta closed cup	
Flammability Limits in Air %: Hydrogen, by reaction with metals.	Upper: 75	Lower: 4
Suitable Extinguishing Media Water spray. Foam. Dry chemical. Carbon dioxide (CO ₂). Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.		
Unsuitable Extinguishing Media None known.		
Specific hazards arising from the chemical Contact with metals may evolve flammable hydrogen gas. Material can create slippery conditions.		
Protective Equipment and Precautions for Firefighters As in any fire, wear self-contained breathing apparatus pressure-demand, NOHSC (approved or equivalent) and full protective gear.		
NFPA	Health 3	Flammability 1
HMIS	Health 3	Flammability 1
		Instability 1
		Instability 1

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Use personal protective equipment. Prevent further leakage or spillage if safe to do so. Material can create slippery conditions.
Environmental Precautions	Do not flush into surface water or sanitary sewer system.
Methods for Containment	Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).
Methods for Cleaning Up	Pick up and transfer to properly labeled containers.
Neutralizing Agent	Acetic acid, diluted.

7. HANDLING AND STORAGE

Handling	Do not get in eyes, on skin or on clothing. Do not breathe mist.			
Storage	Store in original container. Metal containers must be lined. Keep containers tightly closed in a dry, cool and well-ventilated place. Freezing will affect the physical condition but will not damage the material. Thaw and mix before using.			
Storage Temperature	Minimum	35 °F / 2 °C	Maximum	120 °F / 49 °C
Storage Conditions	Indoor	X	Outdoor	
			Heated	
			Refrigerated	

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH
Sodium hydroxide	Ceiling: 2 mg/m ³	TWA: 2 mg/m ³	10 mg/m ³ Ceiling: 2 mg/m ³

Engineering Measures	Ensure adequate ventilation, especially in confined areas. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction.
Personal Protective Equipment	
Eye/Face Protection	Tightly fitting safety goggles. Face-shield.
Skin Protection	Wear suitable protective clothing, Impervious gloves.
Respiratory Protection	In case of inadequate ventilation wear respiratory protection. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
General Hygiene Considerations	Wear protective gloves/clothing. Ensure that eyewash stations and safety showers are close to the workstation location. Remove and wash contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid	Viscosity	Non viscous
Color	Light yellow	Odor	Sweet
Odor Threshold	Not applicable	Appearance	Transparent
pH	13.5	Specific Gravity	1.15
Evaporation Rate	0.48 (BuAc = 1)	Percent Volatile (Volume)	88.8
VOC Content (%)	0.9	VOC Content (g/L)	10.35
Vapor Pressure	14.2 mmHg @ 68°F	Vapor Density	0.6 (Air = 1.0)
Solubility	Completely soluble	n-Octanol/Water Partition	No data available
Melting Point/Range	No data available	Decomposition Temperature	No data available
Boiling Point/Range	212 °F / 100 °C	Flammability (solid, gas)	No data available
Flash Point	> 201 °F / > 94 °C	Method	Seta closed cup
Autoignition Temperature	No information available.		
Flammability Limits in Air %:	Hydrogen, by reaction with metals	Upper: 75 Lower: 4	

10. STABILITY AND REACTIVITY

Chemical Stability	Stable. Hazardous polymerization does not occur.
Conditions to Avoid	Exposure to air or moisture over prolonged periods.
Incompatible Products	Acids and bases, Oxidizing agents, Reducing agents, Amines, Ammonium salts, Hydrocarbons, Metals.
Decomposition Temperature	No data available
Hazardous Decomposition Products	Sodium oxides, Hydrogen chloride gas, Hydroxide, Phosgene, Thermal decomposition can lead to release of toxic or irritating gases and vapors, Hydrogen, by reaction with metals.
Possibility of Hazardous Reactions	Oxidizing potential.

11. TOXICOLOGICAL INFORMATION

Product Information No information available.

The following values are calculated based on chapter 3.1 of the GHS document

Oral LD50	No information available
Dermal LD50	No information available
Inhalation LC50	
Gas	No information available
Mist	No information available
Vapor	No information available

Principle Route of Exposure Skin contact, Eye contact, Inhalation.

Primary Routes of Entry Skin contact, Ingestion.

Acute Effects:

Eyes	Causes burns. Corrosive to the eyes and may cause severe damage including blindness.
Skin	Causes skin burns.
Inhalation	Harmful by inhalation. Causes burns.
Ingestion	Harmful if swallowed. Ingestion causes burns of the upper digestive and respiratory tracts.

Chronic Toxicity Inhaled corrosive substances can lead to a toxic edema of the lungs.

Target Organ Effects Skin, Eyes, Respiratory system.

Aggravated Medical Conditions Respiratory disorders, Skin disorders.

Component Information

Acute Toxicity

Component	Oral LD50	Dermal LD50	Inhalation LC50	Draize Test	Other
Sodium nitrite 7632-00-0	= 85 mg/kg (Rat)	no data available	= 5.5 mg/L (Rat) 4 h	No data available	No data available
Sodium hydroxide 1310-73-2	No data available	= 1350 mg/kg (Rabbit)	No data available	No data available	No data available

Chronic Toxicity

Component	Mutagenicity	Sensitization	Developmental Toxicity	Reproductive Toxicity	Target Organ Effects
Sodium hydroxide 1310-73-2	No data available	No data available	No data available	No data available	Skin; Eyes; Respiratory system

Carcinogenicity There are no known carcinogenic chemicals in this product.

12. ECOLOGICAL INFORMATION

Product Information No information available.

Component Information

Component	Toxicity to Algae	Toxicity to Fish	Microtox	Crustacea	Partition coefficient
Sodium nitrite	No information available.	LC50 = 0.19 mg/L Oncorhynchus mykiss 96 h LC50 0.092 - 0.13 mg/L Oncorhynchus mykiss 96 h LC50 0.4 - 0.6 mg/L Oncorhynchus mykiss 96 h LC50 0.65 - 1 mg/L Oncorhynchus mykiss 96 h LC50 = 2.3 mg/L Pimephales promelas 96 h LC50 = 20 mg/L Pimephales promelas 96 h	No information available	No information available.	-3.7
Sodium hydroxide	No information available.	LC50 = 45.4 mg/L Oncorhynchus mykiss 96 h	No information available	No information available.	N/A

Persistence and Degradability

No information available.

Bioaccumulation

No information available.

Mobility

No information available.

13. DISPOSAL CONSIDERATIONS

Product Disposal

Dispose of in accordance with local regulations.

Container Disposal

Empty containers should be taken for local recycling, recovery, or waste disposal.

14. TRANSPORT INFORMATION

DOT

Proper Shipping Name

Caustic alkali liquids, n.o.s.

Hazard Class

8

UN-No

UN1719

Packing Group

III

Description

UN1719,Caustic alkali liquids, n.o.s.(Sodium Hydroxide),8,PG III

TDG

Proper shipping name

Caustic alkali liquid, n.o.s.

Hazard Class

8

UN-No

UN1719

Packing Group

III

Description

UN1719,Caustic alkalil liquid, n.o.s.,(Sodium Hydroxide),8,PG III

ICAO

UN-No

UN1719

Proper Shipping Name

Caustic alkali liquid, n.o.s.*

Hazard Class

8

Packing Group

III

Shipping Description

UN1719,Caustic alkali liquid, n.o.s.,(Sodium Hydroxide),8,PG III

IATA

UN-No

UN1719

Proper Shipping Name

Caustic alkali liquid, n.o.s.*

Hazard Class

8

Packing Group

III

ERG-Code

8L

Shipping Description

UN1719,Caustic alkali liquid, n.o.s.,(Sodium Hydroxide),8,PG III

IMDG/IMO

Proper Shipping Name

Caustic alkali liquid, n.o.s.

Hazard Class

8

UN-No

UN1719

Packing Group

III

EmS No.

F-A, S-B

Description

UN1719, Caustic alkali liquid, n.o.s.,(Sodium Hydroxide),8,PG III

15. REGULATORY INFORMATION

Inventories

TSCA Complies
 DSL Complies
 U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Component	CAS No.	Weight %	SARA 313 - Threshold Values
Sodium nitrite	7632-00-0	10-30	1.0

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Chronic Health Hazard	Fire Hazard	Sudden Release of Pressure Hazard	Reactive Hazard
Yes	No	No	No	Yes

CERCLA

Component	Hazardous Substances RQs	CERCLA EHS RQs
Sodium nitrite	100 lb	Not applicable
Sodium hydroxide	1000 lb	Not applicable

16. OTHER INFORMATION

Prepared By Laura Strauss
 Supercedes Date 10/08/2014
 Issuing Date 04/11/2017
 Reason for Revision No information available.
 Glossary No information available.
 List of References. No information available.

CHEM-AQUA, INC assumes no responsibility for personal injury or property damage caused by the use, storage, or disposal of the product in a manner not recommended on the product label. Users assume all risks associated with such unrecommended use, storage or disposal of the product. The information provided on this document is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

Safety Data Sheet: CHEM-AQUA 52885

Supersedes Date Not applicable

Issuing Date 09/12/2018

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name CHEM-AQUA 52885
Recommended use Water treatment chemical
Information on Manufacturer
CHEM-AQUA, INC
BOX 152170
IRVING, TEXAS 75015

Product Code 2C41
Chemical nature Aqueous solution of alkali salts
Emergency Telephone
CHEMTREC® 800-424-9300
Telephone inquiry
972-579-2477

2. HAZARD IDENTIFICATION

Color Light yellow - Amber

Physical state Liquid

Odor Slightly Sweet

GHS

Classification

Physical Hazards

Corrosive to Metals

Category 1

Health Hazard

Skin Corrosion/Irritation

Category 1

Serious Eye Damage/Eye Irritation

Category 1

Reproductive Toxicity

Category 2

Specific target organ toxicity (repeated exposure)

Category 2

Other hazards

None

Labeling

Signal Word

DANGER



Hazard statements

H314 - Causes severe skin burns and eye damage

H373 - May cause damage to organs through prolonged or repeated exposure

H361 - Suspected of damaging fertility or the unborn child

H290 - May be corrosive to metals

Precautionary Statements

P280 - Wear protective gloves, protective clothing, eye protection and face protection.

P264 - Wash face, hands and any exposed skin thoroughly after handling.

P260 - Do not breathe mist

P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

P332 + P313 - If skin irritation occurs, get medical attention.

P363 - Wash contaminated clothing before reuse

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

P310 - Immediately call a physician.

P304 + P340 - IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.

P342 + P311 - If experiencing respiratory symptoms, call a physician.

P301 + P330 + P331 - IF SWALLOWED: Rinse mouth. DO NOT induce vomiting. Call a physician if unwell.

P308 + P313 - IF exposed or concerned, get medical attention

P390 - Absorb spillage to prevent damage.

P406 - Store in a corrosion-resistant container.

P501 - Dispose of contents and container in accordance with applicable local regulations.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight-%
Sodium molybdate	7631-95-0	7-13
Potassium tolytriazole	64665-53-8	1-5

Sodium borate decahydrate	1303-96-4	1-5
Potassium hydroxide	1310-58-3	1-5

*The exact percentage (concentration) of composition has been withheld as a trade secret

4. FIRST AID MEASURES

General advice	Do not get in eyes, on skin or on clothing. Do not breathe mist.
Eye Contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention immediately.
Skin Contact	Remove immediately all contaminated clothing. Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately.
Inhalation	Move to fresh air. In case of shortness of breath, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately.
Ingestion	Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention immediately.
Notes to physician	The product causes burns of eyes, skin and mucous membranes. Control of circulatory system, shock therapy if needed.

5. FIRE-FIGHTING MEASURES

Flash Point	Does not flash	Method	Not applicable
Flammability Limits in Air %:	Hydrogen, by reaction with metals.	Upper:	75
		Lower:	4
Suitable Extinguishing Media	Water spray. Carbon dioxide (CO ₂). Foam. Dry chemical. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.		
Specific hazards arising from the chemical	Contact with metals may evolve flammable hydrogen gas. Material can create slippery conditions.		
Protective Equipment and Precautions for Firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, NOHSC (approved or equivalent) and full protective gear.		
NFPA	Health 3	Flammability	0
HMIS -	Health 3	Flammability	0
		Instability	0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Use personal protective equipment. Ensure adequate ventilation. Prevent further leakage or spillage if safe to do so. Material can create slippery conditions.
Environmental precautions	Do not flush into surface water or sanitary sewer system.
Methods for Containment	Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).
Methods for Cleaning Up	Pick up and transfer to properly labeled containers.
Neutralizing Agent	Acetic acid, diluted.

7. HANDLING AND STORAGE

Handling	Do not get in eyes, on skin or on clothing. Do not breathe mist.		
Storage	Store in original container. Metal containers must be lined. Keep containers tightly closed in a dry, cool and well-ventilated place. Freezing will affect the physical condition but will not damage the material. Thaw and mix before using.		
Storage Temperature	Minimum	45 °F / 7 °C	Maximum
Storage Conditions	Indoor	X	Outdoor
			Heated
			115 °F / 46 °C
			Refrigerated

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH
Sodium molybdate	TWA: 0.5 mg/m ³ respirable fraction	TWA: 5 mg/m ³	No data available
Sodium borate decahydrate	TWA: 2 mg/m ³ inhalable fraction STEL: 6 mg/m ³	No data available	TWA: 5 mg/m ³ TWA: 1 mg/m ³
Potassium hydroxide	Ceiling: 2 mg/m ³	No data available	Ceiling: 2 mg/m ³

Engineering Measures	Ensure adequate ventilation, especially in confined areas. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction.
Personal Protective Equipment	
Eye/Face Protection	Tightly fitting safety goggles. Face-shield.
Skin Protection	Wear suitable protective clothing, Impervious gloves.
Respiratory Protection	In case of inadequate ventilation wear respiratory protection. When workers are facing

General Hygiene Considerations

concentrations above the exposure limit they must use appropriate certified respirators. Wear protective gloves/clothing. Ensure that eyewash stations and safety showers are close to the workstation location. Remove and wash contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid	Viscosity	Non viscous
Color	Light yellow - Amber	Odor	Slightly Sweet
Odor Threshold	Not applicable	Appearance	Transparent
pH	13.03	Specific Gravity	1.151
Evaporation Rate	0.50 (Butyl acetate=1)	Percent Volatile (Volume)	91.7
VOC Content (%) - VOC	0	VOC Content (g/L)	0
Spreadsheet			
Vapor Pressure - Existing System	14.87 mmHg @ 70°F	Vapor Density	0.6 (Air = 1.0)
Data			
Solubility	Completely soluble	n-Octanol/Water Partition	No data available
Melting Point/Range	No data available	Decomposition Temperature	No data available
Boiling Point/Range	No data available	Flammability (solid, gas)	No data available
Flash Point	Does not flash	Method	Not applicable
Autoignition Temperature	No information available.		
Flammability Limits in Air %:	Hydrogen, by reaction with metals	Upper: 75 Lower: 4	

10. STABILITY AND REACTIVITY

Chemical Stability	Stable. Hazardous polymerization does not occur.
Conditions to Avoid	Extremes of temperature and direct sunlight, Keep away from open flames, hot surfaces, and sources of ignition.
Incompatible Products	Strong oxidizing agents, Acids.
Decomposition Temperature	No data available
Hazardous Decomposition Products	Carbon oxides, Nitrogen oxides (NOx), Sodium oxides, Sulfur oxides, Hydrogen chloride gas, Phosgene, Hydroxide, Fumes, Hydrogen, by reaction with metals, Thermal decomposition can lead to release of irritating gases and vapors.
Possibility of Hazardous Reactions	None under normal processing.

11. TOXICOLOGICAL INFORMATION

Product Information No information available.

The following values are calculated based on chapter 3.1 of the GHS document

Oral LD50	No information available
Dermal LD50	No information available
Inhalation LC50	
Gas	No information available
Mist	No information available
Vapor	No information available

Principle Route of Exposure Skin contact, Eye contact, Inhalation.

Primary Routes of Entry Ingestion.

Acute Effects:

Eyes	Corrosive to the eyes and may cause severe damage including blindness.
Skin	Causes skin burns.
Inhalation	Harmful by inhalation. Causes burns.
Ingestion	If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.

Chronic Toxicity:

Inhaled corrosive substances can lead to a toxic edema of the lungs. Kidney injury may occur. Contains a known or suspected reproductive toxin.

Target Organ Effects:

Blood, Eyes, Respiratory system, Kidney, Skin.

Aggravated Medical Conditions

Respiratory disorders, Skin disorders, Kidney disorders, Blood disorders.

Component Information

Acute Toxicity

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50	Draize Test	Other
Sodium molybdate 7631-95-0	= 4000 mg/kg (Rat)	no data available	> 2080 mg/m ³ (Rat) 4 h	No data available	No data available
Potassium tolytriazole 64665-53-8	100 mg/kg (Rat)	no data available	4500 ppmV/4h; 11 mg/l/4h; 1.5 mg/l/4h	No data available	No data available
Sodium borate decahydrate 1303-96-4	= 2660 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	No data available	No data available	No data available
Potassium hydroxide	= 284 mg/kg (Rat)	no data available	No data available	No data available	No data available

1310-58-3

Chronic Toxicity

Chemical Name	Mutagenicity	Sensitization	Developmental Toxicity	Reproductive Toxicity	Target Organ Effects
Sodium molybdate 7631-95-0	No data available	No data available	No data available	No data available	Blood; Eyes; Respiratory system; Kidney
Sodium borate decahydrate 1303-96-4	No data available	No data available	No data available	X	Skin; Eyes; Respiratory system
Potassium hydroxide 1310-58-3	No data available	No data available	No data available	No data available	Skin; Eyes; Respiratory system

Carcinogenicity

There are no known carcinogenic chemicals in this product.

12. ECOLOGICAL INFORMATION**Product Information**

No information available.

Component Information

Chemical Name	Toxicity to Algae	Toxicity to Fish	Microtox	Crustacea	Partition coefficient
Sodium borate decahydrate	EC50 = 158 mg/L Desmodesmus subspicatus 96 h EC50 2.6 - 21.8 mg/L Pseudokirchneriella subcapitata 96 h	LC50 = 340 mg/L Limanda limanda 96 h	No information available	1085 - 1402: 48 h Daphnia magna mg/L LC50	N/A
Potassium hydroxide	No information available.	No information available.	No information available	No information available.	0.83

Persistence and Degradability

No information available.

Bioaccumulation

No information available.

Mobility

No information available.

13. DISPOSAL CONSIDERATIONS**Product Disposal**

Dispose of in accordance with local regulations.

Container Disposal

Empty containers should be taken for local recycling, recovery, or waste disposal.

14. TRANSPORT INFORMATION**DOT**

Proper Shipping Name CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.
Hazard Class 8
UN-No UN3266
Packing Group II
Description UN3266, CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.,(POTASSIUM TOLYTRIAZOLE, POTASSIUM HYDROXIDE), 8, PG II

TDG

Proper shipping name CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.
Hazard Class 8
UN-No UN3266
Packing Group II
Description UN3266, CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.,(POTASSIUM TOLYTRIAZOLE, POTASSIUM HYDROXIDE), 8, PG II

ICAO

UN-No UN3266
Proper Shipping Name CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.
Hazard Class 8
Packing Group II
Shipping Description UN3266, CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.,(POTASSIUM TOLYTRIAZOLE, POTASSIUM HYDROXIDE), 8, PG II

IATA

UN-No UN3266
Proper Shipping Name CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.
Hazard Class 8
Packing Group II
Shipping Description UN3266, CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.,(POTASSIUM TOLYTRIAZOLE,

POTASSIUM HYDROXIDE), 8, PG II

IMDG/IMO

UN proper shipping name	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.
Hazard Class	8
UN Number	UN3266
Packing Group	II
Description	UN3266, CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.,(POTASSIUM TOLYTRIAZOLE, POTASSIUM HYDROXIDE), 8, PG II

15. REGULATORY INFORMATION

Inventories

TSCA	Complies
DSL	Complies

U.S. Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazardous Categorization

See Section 2

CERCLA

Chemical Name	Hazardous Substances RQs	CERCLA EHS RQs
Potassium hydroxide	1000 lb	Not applicable

16. OTHER INFORMATION

Prepared By	Adrienne McKee
Supersedes Date	Not applicable
Issuing Date	09/12/2018
Reason for Revision	No information available.
Glossary	No information available.
List of References.	No information available.

CHEM-AQUA, INC assumes no responsibility for personal injury or property damage caused by the use, storage, or disposal of the product in a manner not recommended on the product label. Users assume all risks associated with such unrecommended use, storage or disposal of the product. The information provided on this document is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

Safety Data Sheet: MB-38

Supersedes Date 12/18/2009

Issuing Date 02/06/2013

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name MB-38
Recommended use Biocidal product
Information on Manufacturer
CHEM-AQUA, INC
BOX 152170
IRVING, TEXAS 75015

Product Code C517
Chemical nature Alkaline Aqueous solution
Emergency Telephone Number
CHEMTREC® 800-424-9300
Telephone inquiry
972-579-2477

2. HAZARD IDENTIFICATION

Color Yellow - Green

Physical State Liquid

Odor Chlorine

GHS

Classification

Physical Hazards

Substances/mixtures corrosive to metal

Category 1

Health Hazard

Skin Corrosion/Irritation

Category 1

Serious Eye Damage/Eye Irritation

Category 1

Other hazards

None

Labeling

Signal Word

DANGER



Hazard Statements

H314 - Causes severe skin burns and eye damage

H290 - May be corrosive to metals

Precautionary Statements

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P260 - Do not breathe mist

P264 - Wash face, hands and any exposed skin thoroughly after handling.

P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing.

Rinse skin with water/shower

P332 + P313 - If skin irritation occurs: Get medical advice/attention.

P363 - Wash contaminated clothing before reuse

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

P310 - Immediately call a POISON CENTER or doctor/physician

P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician

P301+ P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting

P312 - Call a physician if you feel unwell.

P406 - Store in corrosive resistant high density polyethylene (HDPE) container with a resistant inliner

P234 - Keep only in original container

P390 - Absorb spillage to prevent material damage

P501 - Dispose of contents/container to an approved waste disposal plant.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %
Sodium hypochlorite	7681-52-9	10-30
Sodium hydroxide	1310-73-2	1-5

4. FIRST AID MEASURES

General advice	Do not get in eyes, on skin or on clothing. Do not breathe vapors or spray mist.
Eye Contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Call a physician or poison control center immediately.
Skin Contact	Remove immediately all contaminated clothing. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison control center immediately.
Inhalation	Move to fresh air. In case of shortness of breath, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately.
Ingestion	Call a physician or Poison Control Center immediately. Drink 1 or 2 glasses of water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth.
Notes to physician	The product causes burns of eyes, skin and mucous membranes. Control of circulatory system, shock therapy if needed.

5. FIRE-FIGHTING MEASURES

Flash Point	Does not flash	Method	Not applicable
Flammability Limits in Air % Hydrogen, by reaction with metals.		Upper	75
Suitable Extinguishing Media		Lower	4
Water spray. Foam. Alcohol-resistant foam. Carbon dioxide (CO ₂). Dry chemical. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.			
Specific hazards arising from the chemical			
Contact with metals may evolve flammable hydrogen gas. Material can create slippery conditions.			
Protective Equipment and Precautions for Firefighters			
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.			
NFPA	Health 3	Flammability 0	Instability 1
HMIS	Health 3	Flammability 0	Instability 1

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Use personal protective equipment. Prevent further leakage or spillage if safe to do so. Material can create slippery conditions.
Environmental Precautions	Do not flush into surface water or sanitary sewer system.
Methods for Containment	Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).
Methods for Cleaning Up	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust)
Neutralizing Agent	Acetic acid, diluted.

7. HANDLING AND STORAGE

Handling	Do not get in eyes, on skin or on clothing. Do not breathe vapors or spray mist.		
Storage	Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. Metal containers must be lined.		
Storage Temperature	Minimum	35 °F / 2 °C	Maximum
Storage Conditions	Indoor	X	Outdoor
			Heated
			Refrigerated
			70 °F / 21 °C

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH
Sodium hypochlorite	No data available	No data available	No data available
Sodium hydroxide	Ceiling: 2 mg/m ³	TWA: 2 mg/m ³	IDLH: 10 mg/m ³ Ceiling: 2 mg/m ³

Engineering Measures	Ensure adequate ventilation, especially in confined areas. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction.
Personal Protective Equipment	
Eye/Face Protection	Tightly fitting safety goggles. Face-shield.
Skin Protection	Wear suitable protective clothing, Impervious gloves.
Respiratory Protection	In case of inadequate ventilation wear respiratory protection. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
General Hygiene Considerations	Wear protective gloves/clothing. Ensure that eyewash stations and safety showers are close to the workstation location. Remove and wash contaminated clothing before re-use. Do not eat, drink or smoke when using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid	Viscosity	Non viscous
Color	Yellow - Green	Odor	Chlorine
Odor Threshold	Not applicable	Appearance	Transparent
pH	13.5	Specific Gravity	1.17
Evaporation Rate	< 1 (Butyl acetate=1)	Percent Volatile (Volume)	85
VOC Content (%)	0	VOC Content (g/L)	0
Vapor Pressure	12.5 mmHg @ 70°F	Vapor Density	< 1 (Air = 1.0)
Solubility	Soluble	n-Octanol/Water Partition	No data available
Melting Point/Range	No data available	Decomposition Temperature	No data available
Boiling Point/Range	284 °F / 140 °C	Flammability (solid, gas)	No data available
Flash Point	Does not flash	Method	Not applicable
Autoignition Temperature	No information available.		
Flammability Limits in Air %	Hydrogen, by reaction with metals. Upper 75 Lower 4		

10. STABILITY AND REACTIVITY

Chemical Stability	Stable. Hazardous polymerization does not occur.
Conditions to Avoid	Keep away from open flames, hot surfaces, and sources of ignition
Incompatible Products	Reducing agents, Acids, Metals, Amines, Ammonia, Ammonium salts, Alcohols, Cyanides, Flammable materials, Combustible material.
Hazardous Decomposition Products	Hydrogen chloride gas, Sodium oxides, Phosgene, Contact with metals liberates hydrogen gas.
Possibility of Hazardous Reactions	None under normal processing

11. TOXICOLOGICAL INFORMATION

Product Information

The following values are calculated based on chapter 3.1 of the GHS document (Rev. 3, 2009):

Oral LD50	No information available
Dermal LD50	No information available
Inhalation LC50	
Gas	No information available
Mist	No information available
Vapor	No information available

Principle Route of Exposure Skin contact, Eye contact, Inhalation.

Primary Routes of Entry None known

Acute Effects

Eyes	Corrosive to the eyes and may cause severe damage including blindness.
Skin	Causes skin burns.
Inhalation	Harmful by inhalation. Causes burns.
Ingestion	If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.

Chronic Toxicity

Target Organ Effects Inhaled corrosive substances can lead to a toxic edema of the lungs.

Aggravated Medical Conditions Respiratory system

Component Information Skin disorders, Respiratory disorders.

Acute Toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation	Draize Test	Other
Sodium hypochlorite	= 8200 mg/kg (Rat)	> 10000 mg/kg (Rabbit)	no data available	no data available	no data available
Sodium hydroxide	no data available	= 1350 mg/kg (Rabbit)	no data available	no data available	no data available

Chronic Toxicity

Component	Mutagenicity	Sensitization	Developmental Toxicity	Reproductive Toxicity	Target Organ Effects
Sodium hypochlorite	no data available	no data available	no data available	no data available	no data available
Sodium hydroxide	no data available	no data available	no data available	no data available	eyes, respiratory system, skin

Carcinogenicity

There are no known carcinogenic chemicals in this product.

Component	ACGIH	IARC	NTP	OSHA	Other
Sodium hypochlorite	not applicable	not applicable	not applicable	not applicable	not applicable
Sodium hydroxide	not applicable	not applicable	not applicable	not applicable	not applicable

12. ECOLOGICAL INFORMATION

Product Information

Toxicity to fish
Pimephales promelas (fathead minnow) LC50 6.45 mg/L @48 hour

Component Information

Component	Toxicity to Algae	Toxicity to Fish	Microtox	Water Flea	log Pow
Sodium hypochlorite	EC50 = 0.095 mg/L Skeletonema costatum 24 h	LC50 0.06 - 0.11 mg/L Pimephales promelas 96 h LC50 4.5 - 7.6 mg/L Pimephales promelas 96 h LC50 0.4 - 0.8 mg/L Lepomis macrochirus 96 h LC50 0.28 - 1 mg/L Lepomis macrochirus 96 h LC50 0.05 - 0.771 mg/L Oncorhynchus mykiss 96 h LC50 0.03 - 0.19 mg/L Oncorhynchus mykiss 96 h LC50 0.18 - 0.22 mg/L Oncorhynchus mykiss 96 h	no data available	EC50= 2.1 mg/L 96 h EC50 0.033 - 0.044 mg/L 48 h	N/A
Sodium hydroxide	no data available	LC50 = 45.4 mg/L Oncorhynchus mykiss 96 h	no data available	no data available	N/A

Persistence and Degradability

No information available.

Bioaccumulation

No information available.

Mobility

No information available.

13. DISPOSAL CONSIDERATIONS

Product Disposal

Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide or rinsate is a violation of federal law. If these wastes cannot be disposed of by use according to label instructions, contact your state pesticide or environmental control agency.

Container Disposal

Empty containers should be taken for local recycling, recovery, or waste disposal.

14. TRANSPORT INFORMATION

DOT

Proper Shipping Name Hypochlorite solutions
Hazard Class 8
UN-No UN1791
Packing Group III
Reportable Quantity (RQ) Sodium hypochlorite, RQ kg = 363.20
Description UN1791, Hypochlorite solutions, 8, PG III , RQ

TDG

Hazard Class 8
UN-No UN1791
Packing Group III

ICAO

UN-No UN1791
Proper Shipping Name Hypochlorite solution
Hazard Class 8
Packing Group III
Shipping Description UN1791, Hypochlorite solution,8,PG III

IATA

UN-No UN1791
Proper Shipping Name Hypochlorite solution
Hazard Class 8
Packing Group III
ERG Code 8L
Shipping Description UN1791,Hypochlorite solution,8,PG III

IMDG/IMO

Proper Shipping Name Hypochlorite solution
Hazard Class 8
UN-No UN1791
Packing Group III
EmS No. F-A, S-B
Shipping Description UN1791, Hypochlorite solution,8,PG III

15. REGULATORY INFORMATION

Inventories

TSCA Complies
 DSL Complies

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Chronic Health Hazard	Fire Hazard	Sudden Release of Pressure Hazard	Reactive Hazard
Yes	No	No	No	No

CERCLA

Component	Hazardous Substances RQs	CERCLA EHS RQs
Sodium hypochlorite	100 lb	Not applicable
Sodium hydroxide	1000 lb	Not applicable

16. OTHER INFORMATION

Prepared By Rachael Mohochi
 Supersedes Date 12/18/2009
 Issuing Date 02/06/2013
 Reason for Revision No information available.
 Glossary No information available.
 List of References. No information available.

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