

REQUEST FOR BIDS

SODIUM HYPOCHLORITE
Water Division

CITY OF RAPID CITY
RAPID CITY, SOUTH DAKOTA

April 9, 2013
2:00 P.M.

SAM KOOIKER
MAYOR

COUNCIL MEMBERS

Bill Clayton
Steve Laurenti
Chad Lewis
Amanda Scott
Bonny Petersen

Charity Doyle
Ritchie Nordstrom
Jerry Wright
John Roberts
Ron Sasso

TERRY WOLTERSTORFF
DIRECTOR OF PUBLIC WORKS

JOHN WAGNER
WATER DIVISION SUPERINTENDENT

**SPECIFICATIONS FOR
SODIUM HYPOCHLORITE
Rapid City, South Dakota**

Bids will be received at the Rapid City Finance Office, 300 Sixth Street, Rapid City, South Dakota on April 9, 2013 until 2:00 P.M. for furnishing SODIUM HYPOCHLORITE which shall meet the following specifications:

SCOPE

It is the intent of these specifications to describe SODIUM HYPOCHLORITE in sufficient detail to secure bids on comparable SODIUM HYPOCHLORITE. All parts not specifically mentioned, which are necessary in order to provide SODIUM HYPOCHLORITE shall be included in the bid and shall conform in strength, quality of material and workmanship to what is usually provided the trade in general.

The City's intent is to obtain a reasonable bid from all qualified bidders. If for any reason bidders are unable to meet or equal the following specifications, the City will receive for consideration minor deviations of specifications. Deviations and variations of specifications must be fully detailed and explained by the bidder on the form provided and stapled to the BIDDER'S PROPOSAL.

All bids must be accompanied by literature completely describing the SODIUM HYPOCHLORITE to be furnished. Each bidder must be a certified dealer authorized by the manufacturer he represents. Each bid shall contain a dealer and/or factory warranty as a guarantee of the product to be furnished. The guarantee shall be stated in the descriptive literature or by a letter.

GENERAL CONDITIONS

1) Bidders *Information*

Each bid envelope shall contain **ONLY ONE** (1) Bid Proposal and shall be marked with the words "**Sealed Bid – SODIUM HYPOCHLORITE**".

Each bid must be accompanied by a certified check or cashier's check for One Hundred Dollars (\$100), such check to be certified or issued by either a State or National Bank and payable to the City of Rapid City, South Dakota, or in lieu thereof, a Two Hundred Dollar (\$200) bid bond, such bond to be issued by a surety authorized to do business in this State, payable to the City of Rapid City, Rapid City, South Dakota, as a guarantee of the bidder entering into a contract, for the supplying of SODIUM HYPOCHLORITE for the City of Rapid City. After this has been accomplished, the bidder's check or bid bond will be returned; the checks or bonds of all the unsuccessful bidders will be returned within thirty (30) days after the bids have been opened.

Bids submitted by mail, express courier, or common carrier cannot be accepted unless received in the City Finance Office prior to the time for the scheduled bid opening. Bids submitted by telefax cannot be accepted.

Each bid envelope shall contain the entire set of specifications and a completed "ARTICLE 5 CONTRACT DOCUMENT" upon submittal of the bid. Incomplete bids will be rejected.

To the extent provided by statute, preference will be given to materials, products, and supplies found or produced within the State of South Dakota. (SDCL Chapter 5-18A.)

The City reserves the right to reject all bids and unless all bids presented are rejected, the lowest responsible bid, in all cases, will be accepted. In case the low bid is not responsible or the bid is not made in accordance with the requirements of SDCL Chapters 5-18A through 5-18D or the low bid is withdrawn, the bid of the next lowest responsible bidder may be accepted; however, to the extent allowed by law the City reserves the right to accept the bid that is to the advantage of and is in the best interest of the City of Rapid City.

Payment for the SODIUM HYPOCHLORITE will be made BY CHECK, within a reasonable time after receipt and approval of the SODIUM HYPOCHLORITE and approval by the Common Council.

The unit price of the bid must be stated on the Bidder's Proposal form, along with the extended price bid. Unit price shall take precedence over extended price; written figures shall take precedence over numerical figures.

The SODIUM HYPOCHLORITE shall be delivered F.O.B., Jackson Springs Water Treatment Plant, 5200 Cleghorn Canyon Rd., Rapid City, South Dakota.

The quantities shown in the proposal are approximate for 2013. It shall be understood that the City of Rapid City reserves the right to purchase more or less than the specified amounts as it deems expedient. Purchases made by the City of Rapid City are subject to available funding. If the Rapid City Council fails to approve additional funding for this purchase in the 2013 budget, the City of Rapid City will not be obligated to purchase any additional SODIUM HYPOCHLORITE.

Bids and quotations shall be for the period starting April 16, 2013, and ending approximately one year later and shall show net delivered prices without State or Federal taxes. The City of Rapid City requires firm bids from all bidders. The City reserves the right to reject any bid not stating a firm price as not responsive.

All prices shall be F.O.B., Rapid City South Dakota to the Jackson Springs Water Treatment Plant.

2) Rejection

If the material does not meet the requirements of these specifications, notice shall be given to the vendor within thirty (30) days after the receipt of the SODIUM HYPOCHLORITE. In this event, payment shall be withheld, and the vendor shall remove the product from the City premises and shall replace it with a like amount of acceptable SODIUM HYPOCHLORITE.

3) Contract Extension

The City of Rapid City annually reserves the option of extending the 2013 contract through the calendar years of 2014, 2015 and 2016. The extension option may be exercised if agreed to by both parties.

Detailed Specifications Sodium Hypochlorite

GENERAL

Each bid shall be accompanied by an affidavit from the vendor that will furnish the Sodium Hypochlorite that indicates that the Sodium Hypochlorite complies with all requirements of the specifications.

1. Product Specifications

The sodium hypochlorite supplied shall comply with all pertinent requirements of the American Water Works Association specifications B300 – Standard for Hypochlorites and shall be furnished in concentrations of 12.5%. Sodium hypochlorite supplied in accordance with this specification shall contain less than 0.15% insoluble matter by weight and shall contain no soluble material or organic substances in quantities capable of producing deleterious or injurious effects on the health of those consuming water that has been treated properly with sodium hypochlorite.

2. Standards:

- a. Sodium hypochlorite shall be certified as suitable for contact with or treatment of drinking water by an accredited certification organization in accordance with ANSI/NSF Standard 60, Drinking Water Treatment Chemicals—Health Effects.
- b. Sodium Hypochlorite shall comply with the latest revision of ANSI/AWWA B300—Standard for Hypochlorites, Section 4.
- c. Certificate of Analysis: Sampling and analysis shall be conducted in accordance with the latest revision of ANSI/AWWA B300—Standard for Hypochlorites, Section 5.

3. Quantities and Delivery

Sodium hypochlorite shall be delivered to the following locations:

Jackson Springs Water Treatment Plant
5200 Cleghorn Canyon Rd
Rapid City, SD

The Jackson Spring Water Treatment Facility has one XLPE storage tanks for accepting sodium hypochlorite with a useable volume of 6,150 gallons. Minimum delivery volume will be one standard tank truck.

- a. Bidder shall supply the volume of their standard tank truck on the bid form.
- b. The anticipated usage for the initial term of the contract is approximately 70,000 gallons of 12.5 trade percent sodium hypochlorite per year. Rapid City retains the option to increase or decrease the quantity purchased based upon actual usage.
- c. The successful bidder shall be able to deliver within 48 hours of notification.

- d. Delivery procedures shall comply with current federal, state, and local regulations and with the latest revision of ANSI/AWWA B300—Standard for Hypochlorites.
 - i. Tank trucks used for the delivery of the sodium hypochlorite shall be fully equipped to unload by pressurizing the tanks with air and shall be equipped with valves to control the flow of sodium hypochlorite into the storage tank and to enable rapid shut-off if an emergency arises.
 - ii. Tank truck hoses shall be equipped to connect to the WTF sodium hypochlorite tank fill line 2" PVC quick connect.

BIDDER'S PROPOSAL

NAME OF BIDDER: Hawkins Water Treatment Group

ADDRESS: 11810 Sturgis Rd., Black Hawk, SD 57718

PHONE NO.: (605) 787-6881 FAX NO.: (605) 787-6882

E-mail address: al.hansen@hawkinsinc.com

Bidder proposes and agrees to and with the City of Rapid City, South Dakota ("City") to furnish SODIUM HYPOCHLORITE at the following price, to-wit:

DESCRIPTION	Quantity	UNIT PRICE (numerical)	EXTENDED PRICE (numerical)
SODIUM HYPOCHLORITE delivered as per specifications (Per Gal) 4800/truck	70,000	\$ <u>1.55</u>	\$ <u>108,500.00</u>

One Hundred Eight thousand-five hundred dollars
(Extended Price in Words)

The within proposal and agreement are based upon the conditions, stipulations, and specifications named in the notice inviting bids for said SODIUM HYPOCHLORITE, which notice and detailed specifications are made a part of this contract as if written herein at length. The SODIUM HYPOCHLORITE shall be delivered F.O.B., Jackson Springs Water Treatment Plant, Rapid City, SD 57702 within 14 calendar days (to be filled in by Bidder) after date of awarding contract.

The Bidder further agrees and states that he has read the notice calling for bids and has studied the detailed specifications and that he is familiar with the terms and conditions stipulated therein and agrees to enter into attached Contract.

Hawkins Water Treatment Group
NAME OF COMPANY - BIDDER

Al Hansen
AUTHORIZED SIGNATURE

Al Hansen-Branch Manager
Print Name & Title

11810 Sturgis Rd., Black Hawk, SD 57718
Address

4/9/13
Date

BIDDER MUST FILL IN ALL SPACES PROVIDED ABOVE

**CONTRACT FOR
SUPPLIES AND EQUIPMENT
BETWEEN
SUPPLIER AND CITY OF RAPID CITY**

THIS AGREEMENT, made the 15th day of April, 2013, by and between Hawkins Water Treatment Group hereinafter "Supplier," and the City of Rapid City, South Dakota, hereinafter "City," WITNESSETH:

That the Supplier and the City, for the consideration named, agree as follows:

ARTICLE 1. SCOPE OF WORK

The Supplier shall furnish all of the materials, labor and perform all of the work as described in the specifications for Supplies and Equipment entitled SODIUM HYPOCHLORITE prepared by the Public Works Department, Rapid City, South Dakota, and shall do everything required by this Contract, General Conditions, Special Conditions, and Detailed Specifications, which are hereby made a part of this Contract, including the following Addenda.

Addendum No.	Dated
_____	_____
_____	_____

ARTICLE 2. TIME OF COMPLETION

The furnishing or ordering of materials, supplies, and equipment under this Contract shall be commenced as soon as possible within the time stated in the specifications unless the specifications expressly provide for a one time delivery, it is agreed that the City may place orders under this Contract at any time or times within the Contract period. Failure to meet the terms of the Contract on or before the completion date may result in forfeiture of the Performance Bond or deposit, if any; and shall be deemed a breach of this Contract. Request for time extensions shall be made in writing to the Water Division at least fourteen (14) days before the Contract completion date. All time extensions will be issued by the City through the Public Works Department.

ARTICLE 3. THE CONTRACT SUM

The City shall pay the Supplier for the performance of the Contract, subject to additions and deductions provided therein, in current funds as follows:

One Hundred Eight Thousand Five Hundred Dollars (\$108,500.00)

ARTICLE 4. ACCEPTANCE AND FINAL PAYMENT

Upon delivery of any items under this Contract, the Individual or Department specified in Article 2 for making time extensions shall satisfy himself by examination that the furnishing of supplies and equipment has been finally and fully completed in accordance with the Specifications and Contract, and shall make up the appropriate purchase order. The Supplier must complete and return a proper City voucher and payment will be made on said voucher as soon as possible after approval by the Common Council.

ARTICLE 5. THE CONTRACT DOCUMENTS

The Notice for Bids, General Conditions, Special Conditions, Addendum, Specifications, and the Bidder's Proposal together with this Agreement, form the Contract, and all are as fully a part of the Contract as if herein setforth at length.

The Supplier further agrees and states that he has read the advertisement calling for bids and has studied the detailed specifications and that he is familiar with the terms and conditions stipulated therein.

IN WITNESS WHEREOF: The City of Rapid, South Dakota, its Council having duly approved this Contract, has caused this Contract to be executed in its behalf by its Mayor, hereunto duly authorized, attested thereto by its Finance Officer, and has hereto attached its corporate seal this 15 day of April, 2013.

If you have any concerns regarding the provision of services or employment on the basis of disability/handicap you may contact our ADA/Section 504 coordinator, ADA Coordinator, Mayor's Office, 300 6th Street, Rapid City, South Dakota 57701 605-394-4110.

THE CITY OF RAPID CITY, SOUTH DAKOTA

ATTEST:

PSumma
City Finance Officer

by *[Signature]*
MAYOR

Date 4.15.13

(SEAL)

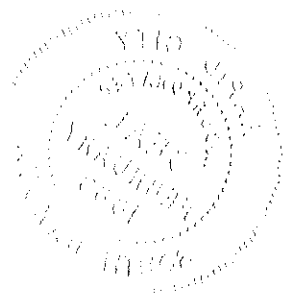
Hawkins Water Treatment Group
NAME OF COMPANY

by *Al Hansen*
AUTHORIZED SIGNATURE

Al Hansen-Branch Manager
Print Name & Title

11810 Sturgis Rd., Black Hawk, SD 57718
Address

Date 4/9/13





Hawkins, Inc.
3100 East Hennepin Avenue
Minneapolis, Minnesota 55413
Phone: (612) 331-6910
Fax: (612) 331-5304

PRODUCT DATA SHEET

Azone-15

PDS – 1033; REVISION 01
EFFECTIVE DATE: 12 SEP 12

General Characteristics:

Description: Azone-15 is a 12.5%, by weight, sodium hypochlorite solution.
Appearance: Clear, colorless to yellow liquid.
Synonyms: Bleach, Liquid Chlorine.
Chemical Formula: NaOCl
Molecular Weight: 74.44
CAS #: 7681-52-9

Standard Specifications:

COMPONENT	SPECIFICATION
Available Chlorine, wt.%	11.7 – 13.2
Reserve Alkalinity, wt.% as NaOH	0.3 – 1.0
Sodium Hypochlorite, wt.%	12.3 – 13.9
Available Chlorine, g/L	142 - 164

Physical Properties:

COMPONENT	SPECIFICATION
Specific Gravity	1.21 – 1.25
pH, Direct	> 10

EPA Registered Name: AZONE-15

EPA Registration Number: 7870-5

Uses and Applications:

- Sanitization of non-porous food contact surfaces; clean-in-place method.
- Sanitization of porous food contact surfaces; rinse method.
- Disinfection of drinking water (public/individual systems).
- Swimming pool water disinfection.
- Disinfection of cooling tower evaporation condenser water.

Drinking Water Certification: NSF/ANSI Std. 60 Approved

Max Use Level (g/L): 84

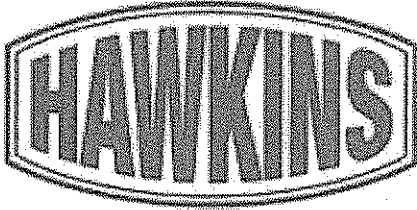
Storage/Handling Recommendations: Hawkins, Inc. recommends the storage/handling of sodium hypochlorite solutions be in accordance with AWWA B300 – Hypochlorites.

Trade % Calculations:

Available Chlorine "Trade %" = Available Chlorine (g/L) / 10
Sodium Hypochlorite "Trade %" = Available Chlorine "Trade %" x 1.05

HCl: 15390, 15392, 15394, 15395, 15396, 15450, 15452, 15500, 15550, 15600, 806143, 815417, 33776, 37115, 37757, 37805

This information is presented for your consideration in the belief that it is accurate and reliable; however, no warranty either expressed or implied is made and no freedom from liability from patents, trademarks, or other limitations should be inferred. The data listed are average values only, and are not to be considered as guarantees expressed or implied, nor as a condition of sale. Typical analysis data which should not be constructed as being specifications fall within the range of standard manufacturing practices. Product as received will vary within this range. Hawkins, Inc. has no control over the transportation, storage, handling or use of the product made by purchasers or others we cannot be responsible for damages resulting from the use of such product. Hawkins, Inc. warrants only that when shipped from its facility the product will meet published specifications. No warranty of merchantability or fitness for a particular purpose is given or implied.



SAFETY DATA SHEET

Version 1

1. Identification of the Substance / Preparation and of the Company / Undertaking

Product Name: Sodium Hypochlorite Solution (Azone 15 EPA Reg. No 7870-5)
UN/ID No UN-1791
Synonyms: Sodium hypochlorite; bleach; hypochlorous acid, sodium salt
Formula: NaOCl
Molecular Weight: 74.45

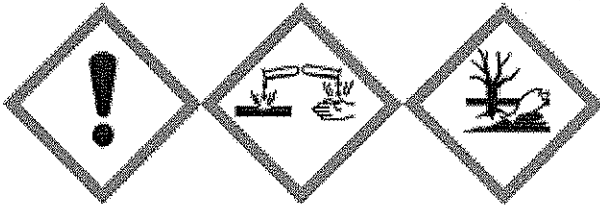
Company Name:
 Hawkins, Inc. 3100 E. Hennepin Avenue Minneapolis, MN 55413 (612-331-6910)

Emergency Telephone:
 CHEMTREC (US): 1-800-424-9300

2. Hazards Identification

GHS - Classification

Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 1 Category 1B
Serious eye damage/eye irritation	Category 1
Acute aquatic toxicity	Category 1
Chronic aquatic toxicity	Category 1



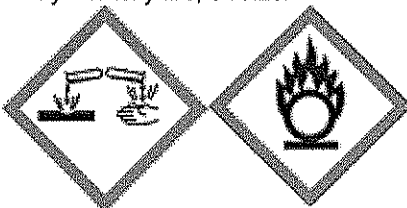
Signal Word: Danger

- Hazard Statements:**
- Harmful if swallowed
 - Causes severe skin burns and eye damage
 - Very toxic to aquatic life with long lasting effects

Physical Hazards

Corrosive to metals	Category 1
Oxidizing liquids	Category 2

- May be corrosive to metals
- May intensify fire; oxidizer



Precautionary Statements:

- P270 - Do not eat, drink or smoke when using this product
- P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
- P330 - Rinse mouth
- P260 - Do not breathe dust/fume/gas/mist/vapors/spray
- P264 - Wash face, hands and any exposed skin thoroughly after handling
- P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting
- P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
- P363 - Wash contaminated clothing before reuse
- P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
- P405 - Store locked up
- 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
- P501 - Dispose of contents/container to industrial incineration plant
- P273 - Avoid release to the environment
- P501 - Dispose of contents/ container to an approved waste disposal plant
- P334 - Immerse in cool water/wrap in wet bandages
- P390 - Absorb spillage to prevent material damage
- P406 - Store in corrosive resistant aluminum container with a resistant liner
- P210 - Keep away from heat/sparks/open flames/hot surfaces. — No smoking
- P220 - Keep/Store away from clothing/ combustible materials
- P221 - Take any precaution to avoid mixing with combustibles
- P280 - Wear protective gloves/protective clothing/eye protection/face protection
- P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish
- P501 - Dispose of contents/container to industrial incineration plant

3. Composition / Information on Ingredients

Hazardous

Chemical Name	CAS No	Weight-%	EC No
Caustic soda	1310-73-2	0.8	215-185-5
Sodium hypochlorite	7681-52-9	10-15.6	231-668-3

4. First Aid Measures

- General Advice:** Immediate medical attention is required.
- Eye Contact:** Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area.
- Skin Contact:** Immediate medical attention is required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
- Inhalation:** Move to fresh air. Call a physician or poison control center immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
- Ingestion:** Immediate medical attention is required. Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person. Remove from exposure, lie down. Clean mouth with water and drink afterwards plenty of water. Call a physician or poison control center immediately.
- Note to Physicians:** Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. Treat symptomatically.

Self-protection of the First Aider: Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.

5. Fire-fighting Measures

Flammable Properties:

Not considered to be a fire hazard; Substance releases oxygen when heated, which may increase the severity of an existing fire; Containers may rupture from pressure building up

Explosive Properties:

Not considered to be an explosion hazard

Suitable Extinguishing Media:

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment; Use water spray to cool fire-exposed containers, to dilute liquid, and control vapor

Unsuitable Extinguishing Media:

No information available

Specific Hazards Arising from the Chemical:

The product causes burns of eyes, skin and mucous membranes; Thermal decomposition can lead to release of irritating and toxic gases and vapors; In the event of fire and/or explosion do not breathe fumes

Protective Equipment and Precautions for Firefighters:

In the event of a fire, wear full protective clothing and MSHA/NIOSH (approved or equivalent) self-contained breathing apparatus with full facepiece operated in the pressure-demand or other positive pressure mode

6. Accidental Release Measures

Personal Precautions:

Use personal protective equipment as required. Evacuate personnel to safe areas. Avoid contact with skin, eyes or clothing. Keep people away from and upwind of spill/leak.

Environmental Precautions:

Do not allow into any sewer, on the ground or into any body of water. Should not be released into the environment. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

Methods for Cleaning Up:

Soak up with inert absorbent material. Clean contaminated surface thoroughly. Dike far ahead of liquid spill for later disposal. Take up mechanically, placing in appropriate containers for disposal. Prevent product from entering drains. Dam up. After cleaning, flush away traces with water.

Other Information:

Not applicable.

7. Handling and Storage

Advice on Safe Handling:

Use personal protective equipment as required. Use only with adequate ventilation. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Use only with adequate ventilation and in closed systems.

Storage Conditions:

Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers.

Incompatible Materials:

Strong acids and bases; Oxidizing agents; Ammonia (Chloramine gas may evolve), Amines, Ammonium salts, Aziridine, Methanol, Phenyl Acetonitrile, Cellulose, Ethyleneimine, Oxidizable Metals, Acids, Soaps, and Bisulfates.

8. Exposure Controls / Personal Protection

Exposure Guidelines

815407 Sodium Hypochlorite Solution (Azone 15 EPA Reg. No 7870-5)

Chemical Name		ACGIH TLV		OSHA PEL		Ontario TWA
Caustic soda		Ceiling: 2 mg/m ³		2 mg/m ³ Ceiling 2 mg/m ³ TWA		CEV: 2 mg/m ³
Chemical Name	European Union	China	Japan	Korea	Australia	Taiwan
Caustic soda		Ceiling: 2 mg/m ³ Ceiling	Ceiling: 2 mg/m ³	Ceiling: 2 mg/m ³	2 mg/m ³ Peak	TWA: 2 mg/m ³

Exposure Guidelines Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992)

Engineering Controls: Ensure adequate ventilation, especially in confined areas

Personal protective equipment (PPE)

Eye/Face Protection: Tight sealing safety goggles. Face protection shield.
Body Protection: Gloves made of plastic or rubber. Rubber boots. Suitable protective clothing. Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact. Wear chemical resistant clothing such as gloves, apron, boots or whole bodysuits made from neoprene, as appropriate.

General Hygiene Considerations:

Wash contaminated clothing before reuse. When using do not eat, drink or smoke. Keep away from food, drink and animal feeding stuffs. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Take off all contaminated clothing and wash it before reuse. Wear suitable gloves and eye/face protection.

9. Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Physical State:	Liquid	Odor:	Odorless, Chlorine-like odor
Appearance:	Aqueous solution	Odor Threshold:	No information available
Color:	Colorless to yellowish		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH:	11	>10
"Salt Out" Point (°F):		No information available
Melting Point/Freezing Point:	-26 °C / -15 °F	12.5%
Boiling Point/Boiling Range:	40 °C / 104 °F	Decomposes slightly
Flash Point:	NA	No information available
Evaporation Rate (BuAc=1):		No information available
Flammability (solid, gas):		No information available
Flammability Limits in Air:		No information available
Upper Flammability Limit:		
Lower Flammability Limit:		
Vapor Pressure (mm Hg) :		Dependent on concentration
Vapor density (Air =1)		No information available
Specific Gravity (H ₂ O=1):	1.2	
Specific Gravity (2nd value):		
Water Solubility:	100% soluble in water	
Solubility(ies):		No information available
Partition Coefficient (n-octanol/water)		No information available
Autoignition Temperature:		No information available
Decomposition Temperature:		No information available
Kinematic Viscosity:		No information available
Dynamic Viscosity:		No information available
Oxidizing Properties:	No information available	
Explosive Properties:	Not considered to be an explosion hazard	

9.2. Other information

Softening Point:	No information available
Molecular Weight:	74.45

815407 Sodium Hypochlorite Solution (Azone 15 EPA Reg. No 7870-5)

VOC Content(%): No information available
 Density: No information available
 Bulk Density: No information available

10. Stability and Reactivity

Stability: Slowly decomposes on contact with air. Rate increases with the concentration and temperature. Exposure to sunlight accelerates decomposition. Sodium hypochlorite becomes less toxic with age

Conditions to Avoid: Exposure to air or moisture over prolonged periods; Incompatibles; Exposure to light; Heat, flames and sparks

Incompatible Materials: Strong acids and bases; Oxidizing agents; Ammonia (Chloramine gas may evolve), Amines, Ammonium salts, Aziridine, Methanol, Phenyl Acetonitrile, Cellulose, Ethyleneimine, Oxidizable Metals, Acids, Soaps, and Bisulfates.

Hazardous Decomposition Products: Thermal decomposition can lead to release of irritating and toxic gases and vapors; Emits toxic chlorine fumes when heated to decomposition; Sodium oxides

Possibility of Hazardous Reactions: None under normal processing

11. Toxicological Information

Product Information

Acute Toxicity: 0% of the mixture consists of ingredient(s) of unknown toxicity.

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

Chemical Name	Oral LD ₅₀ :	Dermal LD ₅₀ :	LC ₅₀ (Lethal Concentration):
Caustic soda		1350 mg/kg (Rabbit)	
Sodium hypochlorite	8200 mg/kg (Rat)	10000 mg/kg (Rabbit)	

Chronic Toxicity:

Carcinogenicity: The table below indicates whether each agency has listed any ingredient as a carcinogen

Chemical Name	IARC
Sodium hypochlorite	Group 3

IARC (International Agency for Research on Cancer)
 Not classifiable as a human carcinogen

12. Ecological Information

Ecotoxicity

84.2% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Toxic to aquatic life with long lasting effects

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
Caustic soda		45.4: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 static	

815407 Sodium Hypochlorite Solution (Azone 15 EPA Reg. No 7870-5)

Sodium hypochlorite	0.095: 24 h <i>Skeletonema costatum</i> mg/L EC50	0.06 - 0.11: 96 h <i>Pimephales promelas</i> mg/L LC50 flow-through 4.5 - 7.6: 96 h <i>Pimephales promelas</i> mg/L LC50 static 0.4 - 0.8: 96 h <i>Lepomis macrochirus</i> mg/L LC50 static 0.28 - 1: 96 h <i>Lepomis macrochirus</i> mg/L LC50 flow-through 0.05 - 0.771: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 flow-through 0.03 - 0.19: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 semi-static 0.18 - 0.22: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 static	2.1: 96 h <i>Daphnia magna</i> mg/L EC50 0.033 - 0.044: 48 h <i>Daphnia magna</i> mg/L EC50 Static
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Ceriodaphnia dubia Acute Toxicity Evaluation:

Azone 15: 48-hour NOEC: 0.25 ppm, 48-hour LOEC: 0.5 ppm, 48-hour LC50: 0.44 ppm (0.37 - 0.52 ppm)

Persistence and Degradability:

No information available.

Bioaccumulation:

No information available.

Mobility:

No information available.

13. Disposal Considerations

Waste from Residues/Unused Products:

Disposal should be in accordance with applicable regional, national and local laws and regulations

Contaminated Packaging:

Do not reuse container.

14. Transport Information

IATA

DOT

Proper shipping name	HYPOCHLORITE SOLUTIONS (SODIUM HYPOCHLORITE)
Hazard Class	8
UN/ID No	UN-1791
Packing Group	III
Reportable Quantity (RQ)	100 lbs
Description	UN1791, HYPOCHLORITE SOLUTIONS (SODIUM HYPOCHLORITE), 8, PG III



TDG

MEX

15. Regulatory Information

International Inventories

815407 Sodium Hypochlorite Solution (Azone 15 EPA Reg. No 7870-5)

All of the components in the product are on the following inventory lists: TSCA (United States);, Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Australia (AICS), South Korea (KECL);, China (IECSC), ENCS (Japan);, Philippines (PICCS), This product contains a substance not listed on international inventories - it is for research and development use only.

AICS	Complies
TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies

Chemical Name	AICS	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS
Caustic soda	Listed	Listed	Listed	-	Listed	-	(2)-1972 (1)-410	Listed	KE-31487	Listed
Sodium hypochlorite	Listed	Listed	Listed	-	Listed	-	(1)-237	Listed	KE-31506	Present

Inventory Legend

AICS - Australian Inventory of Chemical Substances
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances

RESTRICTIONS - REACH TITLE VII No information available

US Federal Regulations

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	CERCLA Hazardous Substances and the Reportable Quantities	SARA Extremely Hazardous Substances EPCRA RQ	SARA Extremely Hazardous Substances TPQ
Caustic soda	1000 lb 454 kg	-	-
Sodium hypochlorite	100 lb 45.4 kg	100 lb	-

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 Hazard Categories

Acute health hazard	Yes
Chronic health hazard	No
Fire hazard	Yes
Sudden release of pressure hazard	No
Reactive hazard	Yes

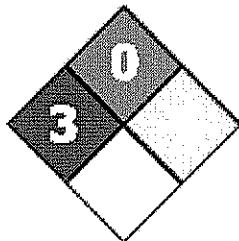
U.S. State Right-to-Know Regulations

California Proposition 65:

This product does not contain any Proposition 65 chemicals

16. Other Information

National Fire Protection Association (NFPA) Ratings



WQA Certification



Certified to NSF/ANSI 60

Maximum Use (mg/L unless otherwise indicated):

84

Prepared By:

HSE Department

Issue Date:

08-Mar-2013

Revision Date:

08-Mar-2013

Revision Note:

MSDS converted to GHS SDS Format.

Disclaimer:

Please be advised that it is your responsibility to inform your employees of the hazards of this substance, to advise them of what these properties mean and be sure they understand exposure information. The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication.

The information presented herein, while not guaranteed, was prepared by competent technical personnel and is true and accurate to the best of our knowledge. No warranty or guaranty, express or implied, is made regarding performance, stability, or otherwise. This information is not intended to be all-inclusive as to the manner and conditions of use, handling, and storage. Other factors may require additional safety or performance considerations. While our technical personnel will be happy to respond to questions regarding safe handling and use procedures, the handling and use remains the responsibility of the consumer. No suggestions are intended as, and should not be constructed as, a recommendation to infringe on any existing patents or to violate any Federal, State, or local laws.

End of Safety Data Sheet

