Safety Data Sheet
GHS-Compliant

May be used to comply with
OSHA's Hazard Communication Standard
29 CFR 1910.1200. Standard must be
consulted for specific requirements

Bison Laboratories, Inc.
100 Leslie Street, Buffalo, NY 14211

PRODUCT IDENTITY	
Crystal Aqua Chlorinating Solution	Safety Data Sheet Revision Date - **February 6, 2015**

Section 1 - Identification

Product Name Sodium Hypochlorite	**Cas #** 7681-52-9
Synonym Chlorinator	**Chemical Formula** NaOCl
Chemical Name Sodium Hypochlorite	**Chemical Family** Inorganic Halogen Compound
Product Use Water treatment (chlorination)	
Manufacturer/Supplier Name Bison Laboratories, Inc.	**Address** 100 Leslie Street, Buffalo, NY 14211-1621
General Information 1-716-895-2707	**Country** USA
Emergency Telephone 1-716-895-2707	**Transportation Emergency Number** **CHEMTREC** 1-800-424-9300

Section 2 - Hazards Identification

GHS Classification:

HEALTH	**PHYSICAL**
Skin corrosion/irritation - Category 1	Corrosive to metals - Category 1
Serious eye damage/eye irritation - Category 1	
Specific target organ toxicity, single exposure -	**ENVIRONMENTAL HAZARDS**
Category 3 respiratory tract irritation	Hazardous to the aquatic environment, acute hazard -
	Category 1
	Hazardous to the aquatic environment, long-term hazard -
	Category 2

GHS Label Elements:

SYMBOLS: corrosive, irritant, hazardous to the aquatic environment

Signal Word: DANGER

Section 2 - Hazards Identification (continued)

GHS Label:

Hazard Statements	*Precautionary Statements (continued)*
May be corrosive to metals. Causes severe skin burns	immediately all contaminated clothing. Rinse skin with
and eye damage. May cause respiratory irritation.	water/shower. If in eyes: Rinse cautiously with water for
Very toxic to aquatic life. Toxic to aquatic life with long	several minutes. Remove contact lenses if present and easy
lasting effects.	to do. Continue rinsing. Immediately call a poison center/
	doctor. Wash contaminated clothing before reuse. Absorb
Precautionary Statements	spillage to prevent material damage. Collect spillage.
Prevention - Wear protective gloves/protective clothing/	**Storage -** Store in a well-ventilated place. Keep container
eye protection/face protection. Do not breathe mist or	tightly closed. Store locked up. Store in corrosive
vapor. Use only outdoors or in a well-ventilated area.	resistant container with a resistant inner liner.
Wash thoroughly after handling. Keep only in original	**Disposal -** Dispose of contents/container in accordance
container. Avoid release to the environment.	with local/regional/national/international regulations.
Response - If swallowed: Rinse mouth. Do NOT induce	
vomiting. If inhaled: Remove person to fresh air and keep	
comfortable for breathing. If on skin or hair: Take off	

Section 3 - Composition/Information on Ingredients

Component Description	Percent	CAS #
Sodium Hypochlorite	5 - 17	7681-52-9
Sodium Hydroxide	0.10 - 4.25	1310-73-2

Section 4 - First Aid Measures

General

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
Show this Safety Data Sheet to the doctor in attendance.

Inhalation

Move to fresh air. Call a physician if symptoms develop or persist.

Section 4 - First Aid Measures (continued)

Eye Contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

Skin Contact

Take off immediately all contaminated clothing. Wash off IMMEDIATELY with plenty of water for at least 15 - 20 minutes. Get medical attention immediately. Wash contaminated clothing before reuse. Call a physician or poison control center immediately.

Ingestion

Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get in the lungs.

Indication of immediate medical attention and special treatment needed

Treat symptomatically. Chemical burns: flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. With eye exposure, continue flushing during transport to hospital.

Most important symptoms/effects, acute and delayed

Corrosive effects. Symptoms may include stinging, tearing, redness, swelling and blurred vision. Permanent eye damage including blindness could result.

Section 5 - Fire Fighting Measures

Suitable Extinguishing Method

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2). Do not use water jet, as this will spread the fire. Do not use dry extinguishing media that contains ammonium compounds.

Specific and/or Unusual Fire and Explosion Hazards

During fire, gases hazardous to health may be formed. No unusual fore or explosion hazards noted.

Special Firefighting Procedures

In case of fire and/or explosion do not breathe fumes. Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Use standard firefighting procedures and consider the hazards of other involved materials.

Section 6 - Accidental Release Measures

Steps to be Taken in Case Material is Released or Spilled

Keep unnecessary personnel away. Wear appropriate personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. For personal protection, see Section 8 of the SDS.

Environmental Precautions

Do not discharge into drains, water courses or onto the ground. Environmental manager must be informed of all major releases.

Section 6 - Accidental Release Measures (continued)

Methods and materials for containment and cleaning up

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills in original containers for re-use. For waste disposal, see Section 13 of the SDS.

Section 7 - Handling and Storage

Precautions for Safe Handling

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

Conditions for Safe Storage

Keep container tightly closed. Store in a cool and well ventilated place. Store in a corrosive resistant container. Consult container manufacturer for additional guidance.

Precautions to be Taken in Handling and Storage

Store away from and do not mix with incompatible materials such as acids, oxidizers, organics, reducing agents and all metals except titanium.

Section 8 - Exposure Controls / Personal Protection

EXPOSURE LIMITS

Substance	PEL	STEL	CEILING
sodium hydroxide (CAS 1310-73-2)	2 mg/m3	2 mg/m3	2 mg/m3
sodium hypochlorite (CAS 7681-52-9)		2 mg/m3	

N/D - No Data Available C = Ceiling Level

Respiratory Protection

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

Skin Protection

Wear appropriate chemical resistant gloves. Wear appropriate chemical resistant clothing. Reports indicate that sodium hypochlorite can react with various fabrics usually increasing with concentration. Reactions vary significantly depending on strength of chemical, material, fabric treatment and color of dyes. FRC treated cotton has a stronger response than plain cotton. Poly blend fabrics and meta aramid fabric have a weaker response than natural fibers. Contact the Personal Protective Equipment manufacturer for specific information about their products.

Eye Protection

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

Section 9 - Physical and Chemical Properties

Boiling Point	**Specific Gravity**
230° F (110° C)	1.22
Vapor Pressure (mm Hg)	**Freezing Point**
12 mm Hg (20° C / 68° F)	-3° to -14° F (-19.4° to -25.6° C)
Vapor Density (AIR = 1)	**Density**
not available	9.9 - 10.5 lbs/gallon

Solubility in Water

completely miscible

Appearance and Odor

clear, colorless to yellow liquid with characteristic bleach odor

Section 10 - Stability and Reactivity

Stability	Unstable		**Conditions to Avoid**
			Contact with incompatible materials. Avoid ultraviolet (UV) light sources.
	Stable	X	Excessive heat. Reacts violently with strong acids. Acid contact will produce
			chlorine gas. Amine contact will produce chloramines.

Incompatibility (Materials to Avoid)

Strong oxidizing agents

Acids

Metals

Organic compounds

Ammonia

Hazardous Decomposition or By-Products

none known

Hazardous	May Occur		**Conditions to Avoid**
Polymerization	Will not Occur	X	

Section 11 - Toxicology Information

Route(s) of Exposure	Inhalation?	Skin?	Ingestion?
	Yes	Yes	Yes

Health Hazards (Acute and Chronic)

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

Carcinogenicity:	NTP?	IARC Monographs?	OSHA Regulated?
	No	No	No

Signs and Symptoms of Exposure

Corrosive effects. Symptoms may include stinging, tearing, redness, swelling and blurred vision. Permanent eye damage including blindness could result.

Toxicology

Sodium Hypochlorite 5 - 17% (CAS mixture)

Dermal (Rabbit)	
LD50	>2 g/kg

Oral (Rat)	
LD50	3 - 5 g/kg

Mutagenic Effects

No data available to indicate product or any components present at >0.1% are mutagenic or genotoxic.

Section 12 - Ecological Information

Ecological Toxicity

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

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

Other Adverse Effects

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

Section 13 - Disposal Considerations

Disposal instructions - Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as a hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/ container in accordance with local/regional/national/international regulations.

Hazard Waste Code - The waste code should be assigned in discussion between the use, the producer and the waste disposal company.

Section 13 - Disposal Considerations (continued)

Waste from residues/unused products

Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues.

This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated Packaging

Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

Section 14 - Transportation Information

14.1	**Inside containers 1.3 gallons or less.**		
	14.1.1	**DOT Classification:**	Consumer Commodity
	14.1.2	**DOT Hazard Class:**	ORM-D
	14.1.3	**Marking:**	Consumer Commodity, ORM-D
	14.1.4	**Marine Pollutant:**	Not listed in Appendix B of the Hazardous Material Table
	14.1.5	**Deposit Container**	RESIDUE: LAST CONTAINED CONSUMER
		Returns:	COMMODITY ORM-D, PGIII
14.2	**Inside containers or single containers exceeding 1.3 gallons.**		
	14.2.1	**DOT Classification:**	Hypochlorite Solutions
	14.2.2	**DOT Hazard Class:**	8, UN1791, PGIII
	14.2.3	**Label:**	Corrosive 8
	14.2.4	**Deposit Container**	RESIDUE: LAST CONTAINED, UN1791,
		Returns:	HYPOCHLORITE SOLUTIONS, 8, PGIII
14.3	**Reportable Quantity (RQ):**		100 lb (45.4 kg) or 80 gallons (based on 12.5% active ingredient)

Section 15 - Regulatory Information

U. S. Federal Regulations

Comprehensive Environmental Response and Liability Act of 1980 (CERCLA) :

Sodium Hydroxide	CAS 1310-73-2	Listed
Sodium Hypochlorite	CAS 7681-52-9	Listed

Toxic Substances Control Act (TSCA) :

Not regulated

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

Not listed

Safe Drinking Water Act (SDWA) :

Not regulated

Clean Air Act (CAA) :

Not regulated

Superfund Amendments and Reauthorization Act (SARA) Title III Information:

Immediate hazard - yes. Delayed hazard - no, Fire hazard - no, Pressure hazard - no, Reactivity hazard - no.

SARA 302 - not listed. SARA 311/312 Hazard Chemical - yes. SARA 313 (TRI Reporting) - not regulated.

Section 15 - Regulatory Information (continued)

State Regulations

California Safe Drinking Water Act (Prop 65) Listing:

This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

Rhode Island Right to Know Act:

Chemical Name:	Sodium Hydroxide	CAS #	1310-73-2
Chemical Name:	Sodium Hypochlorite	CAS #	7681-52-9

New Jersey Right to Know Act:

Chemical Name:	Sodium Hydroxide	CAS #	1310-73-2
Chemical Name:	Sodium Hypochlorite	CAS #	7681-52-9

Massachusetts Right to Know Act Substance List (MSL):

Chemical Name:	Sodium Hydroxide	CAS #	1310-73-2
Chemical Name:	Sodium Hypochlorite	CAS #	7681-52-9

Pennsylvania Right to Know Act Hazardous Substance List:

Chemical Name:	Sodium Hydroxide	CAS #	1310-73-2
Chemical Name:	Sodium Hypochlorite	CAS #	7681-52-9

International Inventories

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

Canadian WHMIS Regulation (Workplace Hazardous Materials Information System):

Classification: E (Corrosive Materials)

Health effects criteria met by this chemical: E - corrosive to skin ; E - TDG class 8 - corrosive substance

Ingredient Disclosure List: included for disclosure at 1% or greater

Section 16 - Other Information

National Fire Protection Association (NFPA) Ratings:

Health Rating - 3 Flammability Rating - 0 Reactivity Rating - 1

Hazardous Material Identification System (HMIS):

Health Rating - 3 Flammability Rating - 0 Reactivity Rating - 1

Disclaimer of Liability

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

Prepared by Bison Laboratories, Inc., 100 Leslie Street, Buffalo, NY 14211