Water Preserver™
CONCENTRATE

Safety Data Sheet

Emergency 24 Hour Telephone: **CHEMTREC 800.424.9300**

Corporate Headquarters: 7C's Safety & Environmental, Inc
P.O. Box 4033
Huntington Beach, CA 92605
Tel: 714.848.0299
Fax: 714.848-0883

*PLEASE NOTE: This SDS was prepared for and applies only to **Water Preserver™ CONCENTRATE** (the bottled product prior to dilution in water) which is used to prepare emergency drinking water for long term storage. The product (concentrate) is packaged in small (1 oz.) bottles to improve safe transportation and handling.*

SECTION 1: IDENTIFICATION (FOR CONCENTRATE ONLY)			
1.1	**Product Identification:**		
	1.1.1	**Product Name:**	WATER PRESERVER™ CONCENTRATE
	1.1.2	**CAS #** (Chemical Abstracts Service)**:**	7681-52-9
	1.1.3	**RTECS** (Registry of Toxic Effects of Chemical Substances)**:**	NH3486300
	1.1.4	**EINECS** (European Inventory of Existing Commercial Substances)**:**	231-668-3
	1.1.5	**EC Number:**	231-668-3
	1.1.6	**Synonym:**	Hypo, Hypochlorite, Liquid Chlorine Solution
	1.1.7	**Chemical Name:**	Sodium Hypochlorite
	1.1.8	**Chemical Formula:**	NaOCl
1.2	**Recommended Uses:**		Water Purification for Water Storage
1.3	**Company Identification:**		7C's Safety & Environmental, Inc P.O. Box 4033 Huntington Beach, CA 92605
1.4	**Emergency Telephone Number:**		**CHEMTREC** 1-800-424-9300 (24 hour Emergency Telephone)
1.5	**Non-Emergency Assistance:**		714.848.0299 (9 AM – 5 PM PST / PDT)

SECTION 2: HAZARD(S) IDENTIFICATION (FOR CONCENTRATE ONLY)		
HEALTH HAZARD	Skin corrosion / irritation:	Category 1
	Serious Eye damage / Eye Irritation	Category 1
	Specific target organ toxicity, single exposure	Category 3 (respiratory tract irritation)
ENVIRONMENTAL HAZARD	Hazardous to the aquatic environment, acute	Category 1
PHYSICAL HAZARD	Corrosive to metals.	Category 1
SYMBOLS	  	
SIGNAL WORD	**DANGER**	
HAZARD STATEMENT	May be corrosive to metals. Causes severe skin burns and eye damage. May cause respiratory irritation. Very toxic to aquatic life.	
PRECAUTIONARY STATEMENT	**Prevention** (For Concentrate Only)	
	Wear appropriate protective gloves/clothing/eye protection/face protection if necessary. Do not breathe mist or vapor. Use in a well-ventilated area. Wash thoroughly after handling. Keep only in original container.	
	Response (For Concentrate Only)	
	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 all contaminated clothing. Rinse skin with water. If in eyes: Rinse cautiously with water for several minutes. Immediately call a poison center/doctor. Remove contact lenses, if present and easy to do. Continue rinsing. Wash contaminated clothing before reuse. Absorb spillage to prevent material damage. Collect spillage.	
	Storage and Disposal (For Concentrate Only)	
	Keep in a cool place and away from sunlight. Keep container tightly closed. Store locked up. Small quantities of concentrate may be disposed of in sanitary sewer. Dispose of container in accordance with local, regional, national, international regulations as specified.	

SECTION 3: COMPOSITION INFORMATION ON INGREDIENTS				
	Ingredient	**Synonyms**	**CAS No.**	**Weight %**
3.1	Sodium Hypochlorite	Liquid Chlorine Solution	7681-52-9	5.25%

SECTION 4: FIRST AID MEASURES (FOR CONCENTRATE ONLY)		
4.1	**IF IN EYES**	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
4.2	**IF ON SKIN OR CLOTHING**	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
4.3	**IF INHALED**	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. • Call a poison control center or doctor for further treatment advice.
4.4	**IF SWALLOWED**	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything by mouth to an unconscious person.
HOT LINE NUMBER		
Have the product container or label with you when calling a poison control center or doctor, or when going for treatment. You may also contact 1-800-424-9300 for emergency medical treatment information.		
NOTE TO PHYSICIAN		
Probable mucosal damage may contraindicate the use of gastric lavage.		

SECTION 5: FIRE FIGHTING MEASURES (FOR CONCENTRATE ONLY)			
5.1	**Flash Point:**		Not applicable.
5.2	**Flammability:**		Not flammable and noncombustible.
5.3	**Auto-Ignition Temperature:**		Not applicable.
5.4	**Products of Combustion:**		Not pertinent.
5.5	**Fire Hazards:**		May decompose, generating irritating chlorine gas.
5.6	**Explosion Hazards:**		Not explosive.
5.7	**Fire Fighting Media and Instructions:**		
	5.7.1	**Extinguishing Media:**	Water fog. Foam. Dry chemical powder. Carbon dioxide.
	5.7.2	**Small Fires:**	Use carbon dioxide, or water spray.
	5.7.3	**Large Fires:**	Use flooding quantities of water as fog.
5.8	**Special Remarks on Fire Hazards:**		Do not use Mono Ammonium Phosphate (MAP) fire extinguishers. Such use may cause explosion with release of toxic gases.

SECTION 6: ACCIDENTAL RELEASE MEASURES (FOR CONCENTRATE ONLY)		
6.1	**Small Spill:**	Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
6.2	**Large Spill:**	Not likely. Limited quantity packaging.
6.3	**Personal Precautions, Protective Equipment & Emergency Procedures:**	Wear appropriate personal protective equipment. Do not touch spilled material unless wearing appropriate protective clothing. Absorb spillage to prevent material damage. For personal protection, see Section 8 of the SDS.
6.4	**Environmental Precautions:**	Do not discharge large quantities into drains, water courses or onto the ground. Your environmental manager must be informed of all large quantity releases.

SECTION 7: HANDLING AND STORAGE (FOR CONCENTRATE ONLY)		
7.1	**Handling:** (For Concentrate)	• Avoid contact with skin or eyes. • Do not ingest concentrate. • Avoid inhalation of vapor or mist. • Wear protective equipment if necessary. • Mix only with water in accordance with label directions. • Mixing this product with ammonia, acids, detergents, etc. or with organic materials, e.g. feces, urine, etc. will release chlorine gas, which is irritating to eyes, lungs, and mucous membranes.
7.2	**Hygiene Measures:** (For Concentrate)	• Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. • While handling this product, avoid eating, drinking or smoking.
7.3	**Storage:** (For Concentrate)	• Do not freeze. • Store in a cool, shaded area. • Inside storage should be in a cool, dry, well-ventilated area. • To maintain hypochlorite strength, do not store in direct sun or heated indoor areas. • Keep in original container. • Keep container closed when not in use. • Do not store adjacent to chemicals that may react if spillage occurs.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION (FOR CONCENTRATE ONLY)				
8.1	**Engineering Controls:**		No special ventilation required unless concentrate is exposed to acidic conditions.	
8.2	**Personal Protection:**			
	8.2.1	**Eye / Face Protection:**	Wear safety glasses, goggles or face shield to prevent eye contact.	
	8.2.2	**Skin Protection:**	Wear appropriate chemical resistant protective clothing such as a rubber apron when splashing may occur and gloves to prevent skin contact. Rinse immediately if skin contact. Remove contaminated clothing promptly and wash before reuse. Clean protective equipment before reuse.	
	8.2.3	**Respiratory Protection:** (For Concentrate)	Avoid breathing vapor or mist. For emergency and other conditions, as in (unlikely) large quantity spills where exposure limits may be significantly exceeded, use NIOSH approved respiratory protection equipment appropriate to the material and/or its components.	
8.3	**Exposure Limits:** (FOR CONCENTRATE ONLY)		**Sodium Hypochlorite**	**Chlorine***
	8.3.1	**AIHA** (American Industrial Hygiene Association) / **WEEL** (Workplace Environmental Exposure Level guides) 2010	2 mg/m^3: 15 minute. (Short-term time weighted average)	Not established
	8.3.2	**ACGIH** (American Conference of Governmental Industrial Hygienists) **TWA** (Time Weighted Average)	Not established.	0.5 ppm
	8.3.3	**ACGIH STEL** (Short Term Exposure Limit)	Not established.	1 ppm
	8.3.4	**OSHA PEL** (Permissible Exposure Limit)	Not established.	0.5 ppm
	8.3.5	**ACGIH** Ceiling	Not established.	Not established
	8.3.6	**NIOSH** (National Institute for Occupational Safety & Health) **IDLH** (Immediate Danger to Life & Health)	Not established.	10 ppm
	8.3.7	**OSHA STEL** (Short Term Exposure Limit)	Not established.	1 ppm as Cl2
	8.3.8	**NIOSH** (15 min. ceiling)	Not established.	0.5 ppm
	* Chlorine is unlikely to be present as a decomposition product, but may be present in incidents of accidental mixing with other chemicals.			

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (FOR CONCENTRATE ONLY)		
9.1	**Appearance:**	Greenish yellow liquid.
9.2	**Odor:**	Pungent.
9.3	**Odor Threshold:**	0.9 mg/m³.
9.4	**pH:**	10.4 – 10.6 (1% solution)
9.5	**Melting Point:**	Not pertinent.
9.6	**Freezing point:**	-7.5°C (-18°F)
9.7	**Boiling Point & Boiling Range:**	Decomposes @ 110°C (230°F)
9.8	**Flash Point:**	No information available.
9.9	**Evaporation Rate:**	No information available.
9.10	**Flammability (solid, gas):**	Not flammable.
9.11	**Upper / Lower Flammability or Explosive Limits:**	Not flammable or explosive
9.12	**Vapor Pressure:**	12.1 mm Hg @ 20°C (68°F)
9.13	**Vapor Density:**	Not available.
9.14	**Relative Density (Specific Gravity):**	1.08 g/mL or 9 lb/gallon @ 20°C (68°F)
9.15	**Solubility in Water:**	Mixes infinitely with water.
9.16	**Partition Coefficient: (n-octanol / water):**	No information available.
9.17	**Auto-ignition Temperature:**	No information available.
9.18	**Decomposition Temperature:**	Decomposes @ 110°C (230°F)
9.19	**Molecular Weight:**	74.5 g/mole
9.20	**Viscosity:**	No information available.

SECTION 10: STABILITY AND REACTIVITY (FOR CONCENTRATE ONLY)		
10.1	**Stability:**	Stable under normal conditions of storage, handling, and use.
10.2	**Instability / Decomposition Temperature:**	Decomposition is dependent on temperature. In summary, for every 10^{o}C increase in storage temperature, the sodium hypochlorite will decompose at an increased rate factor of approximately 3.5.
10.3	**Conditions of Instability:**	High heat, ultraviolet light.
10.4	**Incompatibility with Various Substances:**	Oxidizing agents, acids, nitrogen containing organics, metals, iron, copper, nickel, cobalt, organic materials, and ammonia.
10.5	**Corrosivity:**	Corrosive to metals.
10.6	**Special Remarks on Reactivity:**	Rate of decomposition increases with heat. May develop chlorine if mixed with acidic solutions.
10.7	**Special Remarks on Corrosivity:**	None.
10.8	**Hazardous Polymerization:**	Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION (FOR CONCENTRATE ONLY)			
	Routes of Entry:		Eyes, skin, ingestion, dermal absorption.
11.2	**Acute Toxicity:**		
	11.2.1	**Oral Toxicity** (LD50)**:**	3-5 g/kg (rat)
	11.2.2	**Dermal Toxicity** (LD50)**:**	>2 g/kg (rabbit)
	11.2.3	**Primary Eye Irritation:**	Corrosive
	11.2.4	**Primary Skin Irritation:**	Corrosive
	11.2.5	**Inhalation Toxicity** (LC50):	No data available.
11.3	**Chronic Effects (Human Risk Assessment):**		Based on the toxicity profile and exposure scenarios for sodium hypochlorite, EPA concludes that the risks from chronic and subchronic exposure to low levels of these chemicals are minimal and without consequence to human health.
11.4	**Tolerance Requirement:**		Exempt (EPA document "Index to Pesticide Chemical Names, Part 180 Tolerance Information, and Food and Feed Commodities (by Commodity)" July 2010

SECTION 12: ECOLOGICAL INFORMATION (FOR CONCENTRATE ONLY)			
12.1	**Ecotoxicity:**		Sodium hypochlorite is low in toxicity to avian wildlife, but it is highly toxic to
	12.1.1	**Freshwater Fish Toxicity:**	Atlantic Herring (clupea harengus) LC50 = 0.033 - 0.097 mg//l/96 hr, flow through bioassay (pH: 8) Shiner Perch (cymatogaster aggregata) LC50 = 0.045 - 0.098 mg/l/96 hr, flow through bioassay (pH: 8) Three Spine Stickleback (gasterosteus aculeatus) LC50 = 0.141 - 0.193 mg/l/96 hr, flow through bioassay (pH: 8) Pink Salmon (oncorhynchus gorbuscha) LC50 = 0.023 - 0.052 mg/l/96 hr, flow through bioassay (pH: 8) Coho Salmon (oncorhynchus kisutch) LC50 = 0.026 - 0.038 mg/l/96 hr, flow through bioassay (pH: 8) English Sole (parophrys vetulus) LC50 = 0.044 - 0.144 mg/l/96 hr, flow through bioassay (pH: 8) Fat Head Minnow (pimephales promelas) LC50 = 0.22 - 0.62 mg/l/96 hr, flow through bioassay (pH: 7)
	12.1.2	**Invertebrate Toxicity:**	Water Flea (ceriodaphnia sp. 0) LC50 = 0.006 mg/l/24 hr Water Flea (daphnia magna) LC50 = 0.07 - 0.7 mg/l/24 hr Water Flea (daphnia magna) LC50 = 2.1 mg/l/96 hr Fresh Water Shrimp (gammarus fasciatus) LC50 = 0.4 mg/l/96 hr No common name (nitocra spinipes) LC50 = 0.40 mg/l/96 hr
12.2	**Persistence:**		No data available.
12.3	**Environmental Fate:**		In fresh water, sodium hypochlorite breaks down rapidly into non-toxic compounds when exposed to sunlight. In seawater, chlorine levels decline rapidly; however, hypobromite (which is acutely toxic to aquatic organisms) is formed. EPA believes that the risk of acute exposure to aquatic organisms is sufficiently mitigated by precautionary labeling and National Pollutant Discharge Elimination System (NPDES) permit
12.4	**Bioconcentration:**		This material is not expected to bioconcentrate in organisms.
12.5	**Biodegradation:**		This material is inorganic and not subject to biodegradation.

SECTION 13: DISPOSAL CONSIDERATIONS (FOR CONCENTRATE ONLY)

Do not contaminate food or feed by storage, disposal, or cleaning of equipment. Product or rinsates that cannot be used should be diluted with water before disposal in a sanitary sewer. This product can be neutralized with sodium bisulfite, sodium thiosulfate, sodium sulfite. Do not confuse these products with sulfates or bisulfates. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination system (NPDES) permit and the permitting authority has been notified in writing prior to discharge. For guidance, contact your State Water Board or Regional Office of the EPA. Dispose of in accordance
with all applicable local, County, State, and Federal regulations

SECTION 14: TRANSPORT INFORMATION (FOR CONCENTRATE ONLY)

Not regulated by DOT.
ORM-D Consumer Commodity (Limited Quantity)

SECTION 15: REGULATORY INFORMATION (FOR CONCENTRATE ONLY)

15.1	**U.S. Regulations:**		
	15.1.1	**OSHA HAZCOM** (Hazard Communication)	This (concentrate) material is considered hazardous under the HAZCOM Standard (29 CFR 1910.1200)
	15.1.2	**OSHA PSM** (Process Safety Management)	Not regulated under PSM Standard (29 CFR 1910.119)
	15.1.3	**EPA FIFRA** (Federal Insecticide, Fungicide and	EPA Reg. No. :10897-107 (Registered pesticide under 40 CFR 152.10)
	15.1.4	**EPA TSCA** (Toxic Substance Control Act)	All components are listed or exempted. TSCA 12(b): This product is not subject to export notification.
	15.1.5	**EPA CERCLA** (Comprehensive Environmental Response, Compensation, and Liability	Reportable Quantity (RQ): 45.4 kg (100 lbs) or 210 gallons (based on 5.25% active ingredient).
	15.1.6	**EPA RMP** (Risk Management Plan)	Not listed. (40 CFR 68.130)
15.2	**State of California Regulations:**		
	15.2.1	**Safe Drinking Water and Toxic Enforcement Act of 1986 [Proposition 65, California only]:** Small quantities – less than 100 ppm (parts per million) – of impurities, including bromates, may be found in all chlorinating products, including this product. Bromates are derived from bromides, which are present in sodium chloride (table salt) from which chlorine is manufactured. Additional small quantities of bromates may be generated during the disinfection process. Bromates are known by the State of California to cause cancer when administered by the oral (drinking or ingesting) route. Read and follow label directions and use care when handling or using this product. The US Environmental Protection Agency has established a maximum contaminant level (MCL) for bromates in drinking water at 10 ppb (parts per billion). Application of this product in accordance with label directions at use dilution will not exceed this level. This warning is provided pursuant to Proposition 65, Chapter 6.6 of the California Health and Safety Code, which requires the Governor of California to publish a list of chemicals "known to the State to cause cancer or reproductive toxicity." This list is compiled in accordance with the procedures established under the proposition, and can be obtained on the internet from California's Office of Environmental Health Hazard Assessment at http://www.oehha.ca.gov.	
	15.2.2	**CDPR** (California Department of Pesticide Regulation)	Registration No: 61428-1
	15.2.3	**CalARP** (California Accidental Release Prevention Program)	Not regulated.
15.3	**Canada Regulations:**		

	15.3.1	**WHMIS** (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.

	15.3.2	**DSL** (Domestic Substances List)	All components of this product are on the DSL.
15.4	**International Inventory:**		
	15.4.1	**AICS** (Australian Inventory of Chemical Substances)	On inventory or in compliance with inventory.
	15.4.2	**KECI** (Korean Existing Chemicals Inventory)	On inventory or in compliance with
	15.4.3	**PICCS** (Philippine Inventory of Chemicals and Chemical Substances)	On inventory or in compliance with inventory.
	15.4.4	**IECSC** (Inventory of Existing Chemical Substances in China)	On inventory or in compliance with inventory.
	15.4.5	**NZIoC** (New Zealand Inventory of Chemicals)	On inventory or in compliance with inventory.

SECTION 16: OTHER INFORMATION (FOR CONCENTRATE ONLY)				
16.1	**HMIS III** (Hazardous Materials Identification System):			
	16.1.1	**HEALTH**	**2**	
	16.1.2	**FLAMMABILITY**	**0**	
	16.1.3	**PHYSICAL HAZARD**	**1**	
	16.1.4	**PERSONAL PROTECTION**	See Section 8.	
16.2	**NFPA 704** (National Fire Protection Association):			
	16.2.1	**HEALTH**	**2**	
	16.2.2	**FLAMMABILITY**	**0**	
	16.2.3	**INSTABILITY**	**0**	
	16.2.4	**SPECIAL**	**None**	
16.3	**International Fire Code / International Building Code:**		Irritant.	
16.4	**ANSI** (American National Standards Institute):			
	16.4.1	**Hazardous Industrial Chemicals -** SDS-Preparation:	Complies with **ANSI Z400.1 – 2004**.	
	16.4.2	**Hazardous Industrial Chemicals -** Precautionary Labeling:	Complies with **ANSI Z129.1 – 2006**.	

Note: The information contained herein, while not guaranteed, was prepared by competent technical personnel and is true and accurate to the best of our knowledge and belief. NO WARRANTY OR GUARANTEE, express or implied, is made regarding the product performance, product stability, or as to any other condition of use, handling, transportation, and storage. Customer use, handling, transportation, and storage may involve additional safety and/or performance considerations. Our technical personnel will be happy to respond to questions regarding safe handling, storage, transportation, and use procedures. The safe handling, storage, transportation, and use procedures remain the sole responsibility of the customer. No suggestions for handling, storage, transportation, or use are intended as or to be construed as recommendations which may