MATERIAL SAFETY DATA SHEET

Section I. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

CHEMICAL NAME : Sodium Hypochlorite
CAS #: 7681-52-9
FORMULA: NaOCL
CHEM. FAMILY: Bleaching Agents (oxidizers)

PRODUCT NAMES: SODIUM HYPOCHLORITE (5% + CL2, 5.25% + CL2, 10% + CL2, 12% + CL2, 12.5% + CL2)
SODIUM HYPOCHLORITE (10%, 12.5%, 15%, 18%, 20%)
(12.5%, 12.5% GAC, 12.5%, 16% TRADE)
EXTRACT 2; LCS LIQ CHLORINATION SANITIZER

SYNONYMS:
Bleach;
Soda Bleach Liquor;
Chlorine Bleach;

SUPPLIERS NAME: Harcros Chemicals Inc.
5200 Speaker Road
Kansas City, KS 66106-1095

SUPPLIERS PHONE NUMBER : 913-321-3131
TRANSPORTATION EMERGENCY PHONE NUMBER: 1-800-424-9300

EPA Registration Number for Sodium hypochlorite 12.50% Chlorine 148-1288
EPA Registration Number for Sodium hypochlorite 10.00% Chlorine 148- 628

Section II. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:
LABEL Signal Word: DANGER!
PRECAUTIONS
Wear protective equipment when handling. Use only with adequate ventilation. Wash thoroughly after handling. Do Not get in eyes, skin, or clothing. Keep from contact with clothing or other combustible materials. Do not swallow.

ROUTE(S) OF ENTRY: Eye contact, Skin contact, Inhalation.

Potential Health Effects (ACUTE AND CHRONIC):
OVEREXPOSURE MAY CAUSE DAMAGE TO,
DISORDERS OF, OR ADVERSELY AFFECT THE FOLLOWING SYSTEMS, FUNCTIONS, ORGANS:
Destruction of all body tissues.

OVEREXPOSURE MAY AGGRAVATE DISORDERS OF:
The skin, eyes, respiratory system.

CARCINOGENICITY: No components, present in excess of 0.1% by weight are listed as carcinogens by IARC, NTP, or OSHA.

Section III. HAZARDS IDENTIFICATION CONTINUED

EYE: Eye contact with product may cause severe irritation, eye damage, or blindness.

SKIN: Skin contact may cause Irritation, burns.
Prolonged r repeated contact may cause skin damage.

INHALATION: Inhalation may cause severe irritation, sneezing
Prolonged or repeated overexposure by inhalation may cause pneumonia, lung damage, damage to respiratory system, even death

INGESTION: Ingestion may cause severe irritation, tissue ulceration, gastrointestinal damage, circulatory collapse, convulsions, or coma.

Section III. COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENTS	CAS NUMBER	MAX Percentage%	EXPOSURE LIMITS TWA/TLV ppm	STEL ppm	CEIL ppm	AGENT
Sodium Hypochlorite Hypochlorous Acid, Sodium Salt	7681-52-9	20.00	(As chlorine) 0.50	1.00		OSHA/ACGIH
Caustic Soda Sodium Hydroxide	1310-73-2	3.00	(As sodium hydroxide) 2.00 mg/m3			OSHA/ACGIH

Section IV. FIRST AID MEASURES

EYE CONTACT:
Immediately flush eyes with plenty of water for at least 15 minutes, while holding eyelids apart to ensure flushing of entire surface. Call a physician.

SKIN CONTACT:
Immediately flush skin with plenty of water for at least 15 minutes, while removing contaminated clothing and shoes. Thoroughly clean clothing and shoes before reuse. Call a physician.

INHALATION:
Remove to fresh air. If not breathing, give artificial respiration, preferably mouth to mouth. If breathing is difficult give oxygen. Call a physician.

INGESTION:
If swallowed, DO NOT induce vomiting. Rinse mouth with water. Dilute stomach contents by drinking water. If vomiting occurs spontaneously, keep head below hips to prevent breathing of vomit into lungs. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. Call a physician or poison control center immediately.

Section V. FIRE FIGHTING MEASURES

FLASHPOINT (METHOD): N/A

FLAMMABLE LIMITS: (% Volume in Air) UPPER: N/D LOWER: N/D

EXTINGUISHING MEDIA: Water

SPECIAL FIRE FIGHTING PROCEDURES:
Prevent human exposure to fire, fumes, smoke, and products of combustion. Evacuate non-essential personnel. Firefighters should wear full face, self-contained breathing apparatus and impervious protective clothing.

UNUSUAL FIRE AND EXPLOSION HAZARDS:
Product does not burn, but can provide oxygen, which can intensify a fire. Toxic fumes may be released. Product is an oxidizer. It may react vigorously with organics or other materials resulting in an explosion and fire.

Section VI. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:
Product may be toxic to fish or aquatic life. Evacuate non-essential personnel, eliminate ignition sources, and wear protective equipment (See Section VIII). Shut off source of leak only if safe to do so. Contain spill. Recover free product. To clean up residue, reduce by adding reducing agents such as bisulfites or ferrous salt solutions. Some heat will be produced. May
be neutralized with reducing agents. Keep on alkaline side and dilute with copious quantities of water. Principal end product is salt water (NaCl).

DISPOSAL METHOD:
Solids must be disposed of in a permitted waste management facility. Recovered liquids may be reprocessed or incinerated. Incineration must be handled in a permitted facility. Dispose of material in accordance with all Federal, State and local regulations. Local regulations may be more stringent than Federal or State.

Section VII. HANDLING AND STORAGE

HANDLING: For Industrial use only.
Do Not add any other product to this container. For industrial use only. Do Not apply heat to container. ATTENTION: This container hazardous when emptied. Since emptied container contains product residues (vapor or liquid), all labeled hazard precautions must be observed.

STORAGE:
Keep container closed when not in use. Store in a cool dry place. Store out of direct sunlight and away from heat. Decomposition can cause pressure-buildup in closed containers. Relieve internal pressure when received and at least weekly thereafter by slowly loosening bung. Retighten immediately. Wear protective equipment. Keep out of reach of children.

Section VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:
Mechanical: General ventilation is usually adequate.
Mechanical ventilation may be required to maintain exposure levels below limits.

Section VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION Continued.

RESPIRATORY PROTECTION: If exposure limits are exceeded, or if exposure may occur, use a NIOSH/MSHA respirator approved for your conditions of exposure. Refer to the most recent NIOSH publications concerning chemical hazards, or consult your safety equipment supplier. Respiratory protection programs must be in compliance with OSHA requirements in 29 CFR 1910.134. For emergencies, a NIOSH/MSHA approved positive pressure-breathing apparatus should be readily available.

EYE PROTECTION: Chemical goggles, Safety glasses with non-perforated side shield. Always wear eye protection when working with chemicals. Do Not wear contact lenses when working with chemicals.

SKIN PROTECTION: Impervious gloves, clean body covering, rubber apron.

OTHER PROTECTIVE EQUIPMENT:
Safety shower, eye wash fountain, and washing facilities should be readily available.

WORK HYGIENIC PRACTICES: Avoid contact with skin, eyes, and clothing. After handling this product, wash hands before eating, drinking, or smoking. If contact occurs, remove contaminated clothing. If needed, take First Aid action shown in Section IV. Launder contaminated clothing before reuse.

Section IX. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Colorless to lightly Colored Liquid
Odor: Sharp
pH: aqueous approx.: 11.000 to 12.0000
Boiling point/boiling range: > or = to 230 deg. F.
Freezing Point: N/D
Flash Point: N/A
Vapor Pressure: (MM HG.): 12.1000 to 17.5000 @ 68 deg. F.
Vapor Density (Air =1): N/D
Solubility In Water: Soluble
Specific Gravity:(H_2O=1): 1.0800 to 1.4000 @ 68 Deg. F.
Evaporation Rate: (Water =1): N/D
Percent Volatile by Volume: N/D

Section X. STABILITY AND REACTIVITY

Chemical Stability: Stable when stored in container under proper conditions.

Materials to avoid: Amphoteric metals, inorganic acids, organic acids, organic bases, hydrocarbons, organic mixtures.
Avoid contact with amphoteric metals which include aluminum, copper, zinc, and brass. Avoid contact with strong reducing agents which include hydrogen, hydrazine, sulfides, sulfites, and nitrites. Product is an oxidizer. It may react vigorously with organics or other materials resulting in an explosion and fire.

Hazardous Decomposition or Byproducts: Hydrogen Chloride, Chlorine, Oxygen.

Hazardous Polymerization: Will not occur

Section XI. TOXICOLOGICAL INFORMATION

ANIMAL TEST DATA
Not Available.

Section XII. ECOLOGICAL INFORMATION

Not Available.

Section XIII. DISPOSAL CONSIDERATIONS

Waste Disposal Method: Follow applicable local, state, and federal regulations.

Section XIV. TRANSPORT INFORMATION

DOT (Department of Transportation)
Proper Shipping Name: Hypochlorite Solutions
Hazard Class: 8
UN/NA Number: UN1791
Packaging Group: III
Label Requirements: Corrosive
Reportable Quantity (RQ): None

Section XV. REGULATORY INFORMATION

S.A.R.A. Information
HAZARDS : Acute, Fire, Chronic
PHYSICAL DATA : Mixture, Liquid

EPCRA APPLIES:
312: Y
313: N

MAXIMUM USE LEVEL IN POTABLE WATER:
For Sodium Hypochlorite 10% 100 mg/L
For sodium Hypochlorite 12.5% 80 mg/L

CERCLA Reportable Quantity:
Contains Sodium Hypochlorite with an RQ of 100 lbs.

TSCA INVENTORY STATUS : Listed
TSCA, 40 CFR 710: Sources of the raw materials used in this mixture assure that all chemical ingredients present are in compliance with Section 8(b) Chemical Substance Inventory, or are otherwise in compliance with TSCA.
International Inventories:
Canada (DSL): Listed
China (CIS): Listed
Australia (AICS): Listed
Europe (EINECS): Listed
Japan (MITI): Listed

Section XVI. OTHER INFORMATION

HMIS HEALTH:	2	DATE ISSUED: 931230
FLAMMABILITY:	0	DATE REVISED: 090316
REACTIVITY:	2	SECTIONS: New Date, EPA Reg. No.'s added.
PERSONAL PROTECTION:	X	Sections II & III reversed.

N/A = NOT APPLICABLE
N/D = NOT DETERMINED
N/E = NOT ESTABLISHED

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