Harcros Chemicals Inc
Kansas City, Kansas

MATERIAL SAFETY DATA SHEET Page 1

PRODUCT NAME: SODIUM HYPOCHLORITE 10% + CL2
PRODUCT CODE: 09567
CAS #: 007681529

FORMULA: NaOCl
CHEM. FAMILY: bleaching agents (oxidizers)
CHEMICAL NAME AND SYNONYMS:
Sodium Hypochlorite Solutions;
Bleach;
Soda Bleach Liquor;
Chlorine Bleach;
MSDS 001767 DETAIL 01038
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

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

SECTION I HAZARDOUS INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>MAX % W/W</th>
<th>SARA APPLIES</th>
<th>TWA/TLV (ppm)</th>
<th>STEL (ppm)</th>
<th>CEIL (ppm)</th>
<th>SKIN AGENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium Hypochlorite</td>
<td>15.0</td>
<td>Y N</td>
<td>As Chlorine</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hypochlorous Acid, Sodium Salt</td>
<td></td>
<td></td>
<td>TWA/TLV 0.5 ppm</td>
<td>OSHA/ACGIH</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(CAS # 7681-52-9)</td>
<td></td>
<td></td>
<td>STEL - ppm</td>
<td>OSHA/ACGIH</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caustic Soda</td>
<td>3.0</td>
<td>Y N</td>
<td>As Sodium Hydroxide</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sodium Hydroxide</td>
<td>(CAS # 1310-73-2)</td>
<td></td>
<td>TWA/TLV 2 mg/m3 (Ceiling)</td>
<td>OSHA/ACGIH</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SECTION II HEALTH HAZARDS

POTENTIAL EFFECTS OF EXPOSURE EYES

Continued On Page 2
SECTION II HEALTH HAZARDS

Eye contact with product may cause severe irritation, eye damage, blindness.
SKIN
Skin contact may cause irritation, burns.
Prolonged or repeated skin contact may cause skin damage.
INHALATION
Inhalation may cause severe irritation, sneezing.
Prolonged or repeated exposure 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, coma.

even death

TARGET ORGANS
OVEREXPOSURE MAY CAUSE DAMAGE TO,
DISORDERS OF, OR ADVERSELY AFFECT THE FOLLOWING SYSTEMS, FUNCTIONS, ORGANS: destruction of all body tissues.

FIRST AID

FIRST AID EYES
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.

FIRST AID SKIN
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.

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

FIRST AID INGESTION
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 vomit into lungs. Call a physician immediately.

OTHER INFORMATION

ROUTES OF ENTRY

eye contact: skin contact: inhalation

OVEREXPOSURE MAY AGGRAVATE DISORDERS OF THE
eyes, skin, respiratory system.

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

SECTION III SPECIAL PROTECTION

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Kansas City, Kansas

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PRODUCT NAME : SODIUM HYPOCHLORITE 10% + CL2  
PRODUCT CODE : 09567  
55 GAL POLY  

SECTION III SPECIAL PROTECTION

(Continued)

PROTECTIVE EQUIPMENT

PROTECTIVE EQUIPMENT EYES
chemical goggles faceshield

PROTECTIVE EQUIPMENT SKIN
impervious gloves rubber apron clean body covering clothing

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.

VENTILATION REQUIRED:
Adequate ventilation is required to minimize exposure or to maintain exposure levels below
OSHA/ACGIH requirements. Local mechanical ventilation may be required.

ADDITIONAL PROTECTIVE MEASURES
Safety shower, eye wash fountain, and washing facilities should be readily available.

SECTION IV FIRE & EXPLOSION HAZARD DATA

Flash Point (METHOD): > CR = N/A
Flammable Limits (% Volume in Air)  UPPER: N/D  Lower: N/D

HMIS Info
Health : 2
Fire : 0
React : 2
Special : X

EXTINGUISHING MEDIA

water

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 & 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 V PHYSICAL DATA

Continued On Page 4
SECTION V PHYSICAL DATA

Boiling Point: N/D
Freezing Point: -10 deg. F
Specific Gravity (H2O=1): 1.2000 to 1.2400 @ 68 deg. F
Vapor Pressure (MM HG): > OR = 17.500 @ 68 deg. F
Vapor Density (AIR=1): N/D
Evaporation Rate (NA =1): N/D
Solubility in Water: COMPLETE
Percent Volatile by Volume: N/D
pH: aqueous approx. > OR = 12.000
Appearance: COLORLESS TO LIGHTLY COLORED LIQUID

Odor: SHARP

SECTION VI REACTIVITY DATA

STABILITY
Stable when stored in container under proper conditions.

INCOMPATABILITY
metals/metal blends inorganic acids inorganic bases organic acids organic bases organic mixtures
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 PRODUCTS
chlorine hydrogen chloride oxygen
HAZARDOUS POLYMERIZATION
Will not occur

SECTION VII SPILL AND LEAK PROCEDURES

STEPS TO BE TAKEN IF 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 III). 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

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SECTION VII SPILL AND LEAK PROCEDURES

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 hazardous waste management facility. Dispose of material in accordance with all Federal, State and local regulations. Local regulations may be more stringent than Federal or State.

SECTION VIII

Proper Shipping Name: HYPOCHLORITE SOLUTIONS

Hazard Class: 8, UN1791, PGIII
Label Requirements: CORROSIVE
Reportable Quantity: None

SECTION IX ADDITIONAL INFORMATION

LABEL SIGNAL WORD
DANGER
PRECAUTIONS

Wear protective equipment when handling. Use only with adequate ventilation. Wash thoroughly after handling. Do Not breathe vapor, mist, or dust. Do Not get in eyes, on skin, or clothing. Keep from contact with clothing or other combustible materials.

Do not swallow.

HANDLING

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 X COMPLIANCE INFORMATION

NSF INFORMATION
MAXIMUM USE LEVEL IN POTABLE WATER: 250 mg/L

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You should satisfy yourself that you have all current data relevant to your particular use. Harcros Chemicals Inc knows of no medical condition, other than those noted on this material safety data sheet, which are generally recognized as being aggravated by exposure to this product.