

# MATERIAL SAFETY DATA SHEET

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FOR 24 HOUR EMERGENCY INFORMATION, CALL CHEMTREC: 1 (800) 424-9300

PRODUCT NAME: SODIUM HYPOCHLORITE SOLUTION  
TRADE NAMES: Bleach, Sodium Hypochlorite, Sodium Hypochlorite Solution, Javel Water Bleach,  
Soda Bleach  
DATE PREPARED: 10/08/2004

## SECTION 1. PRODUCT IDENTIFICATION

CHEMICAL FORMULA: NaOCl  
CAS. NO.: 7681-52-9  
MOLECULAR WEIGHT: 74.45  
SHIPPING NAME AND HAZARD CLASS (DOT):  
HYPOCHLORITE SOLUTION, (with more than 5%, but less than 16% available chlorine).e 8  
(Corrosive), UN1791, PGIII

## SECTION 2. HAZARDOUS INGREDIENTS

MATERIALS:  
Sodium Hypochlorite 5 - 15%  
Sodium Hydroxide 0.3 - 5% Approximate  
Water Balance

## SECTION 3. PHYSICAL DATA

BOILING POINT: Decomposes prior to boiling  
VAPOR PRESSURE: Approximate that of air  
VAPOR DENSITY: Approximate that of air  
SPECIFIC GRAVITY: 1.0890 @6.0% by volume @ 68°F  
1.2180 @15.5% by volume @ 68°F  
SOLUBILITY IN WATER: Complete  
EVAPORATION RATE: N/A  
COLOR: Clear to Light Yellow Liquid  
ODOR: Pungent, irritating, that of household bleach  
PH APPROXIMATELY: 12.4

## SECTION 4. FIRE AND EXPLOSION DATA

FIRE: Not considered to be a fire hazard  
EXPLOSION: Not considered an explosion hazard  
FIRE EXTINGUISHING MEDIA: Use any means suitable for extinguishing surrounding fire.

## SECTION 5. REACTIVITY DATA

**STABILITY:** Stable under ordinary conditions of use and storage. Slowly decomposes on contact with air. Rate increases with the concentration and temperature.

**INCOMPATIBILITY: (MATERIALS TO AVOID)** Reacts vigorously with amines, ammonium salts, reducing agents, methanol, acids and most organics. Will liberate chlorine gas!

**HAZARDOUS DECOMPOSITION PRODUCTS:** Decomposes under various mechanisms. May generate chlorine or oxygen which may be toxic and explosive, respectively.

**HAZARDOUS POLYMERIZATION:** This substance does not polymerize.

## SECTION 6. HEALTH DATA

**IS CHEMICAL LISTED AT A CARCINOGEN OR POTENTIAL CARCINOGEN?**

NTP - NO

IARC - NO

OSHA - NO

**MEDICAL CONDITION GENERALLY AGGRAVATED BY EXPOSURE:** Persons with impaired respiratory function or heart disorder (or disease) may be more susceptible to the effects of the substance.

**PERMISSIBLE EXPOSURE LIMIT:**

OSHA: Sodium Hydroxide 2mg/m<sup>3</sup> ceiling

Chlorine .05 ppm - 8 hour TWA, 1ppm - 15 STEL

**ACUTE TOXICITY - Danger Corrosive**

**INGESTION -** Ingestion of a few ounces can cause corrosion of mucous membranes, swelling of the throat, perforation of the esophagus and stomach, vomiting, colitis and circulatory collapse. May lead to convulsions, coma or death.

**EYE/SKIN -** Liquid contact can produce irritations of the skin with blistering. Direct contact with eyes may cause redness, pain and in the case of concentrated Hypochlorite (20% by volume), permanent damage.

**INHALATION -** Inhalation of mist or fumes can cause bronchial irritation, cough, difficult breathing, inflammation of the mouth, nausea, and in severe exposures, pulmonary edema. Material has order of chlorine.

## SECTION 7. EMERGENCY FIRST AID/PROCEDURES

**EYE CONTACT:** Immediately flush skin with copious amounts of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Seek medical attention.

**SKIN CONTACT:** Immediately flush affected areas with copious amounts of water for at least 15 minutes while removing any contaminated clothing/shoes. If irritation occurs, consult a physician.

**INHALATION:** Move person to fresh air. If breathing is difficult, administer oxygen and call a physician. If not breathing, give artificial respiration.

**INGESTION:** Do not induce vomiting! Give large quantities of water. Never give anything by mouth to an unconscious person. Take immediately to a hospital or physician.

**NOTE TO PHYSICIAN:** Do not administer acidic antidotes or Sodium Bicarbonate following Sodium Hypochlorite overexposure. An ounce of 1% Sodium Thiosulfate or milk of magnesia is helpful.

## SECTION 8. OCCUPATIONAL CONTROL

**VENTILATION:** Local exhaust.

**PERSONAL RESPIRATORS:** Recommended for all personnel working in or about an area of potential mist exposure. Use only NIOSH/MSHA approved respirators for mists and chlorine.

**EYE PROTECTION:** Use chemical safety goggles impervious to product. Contact lenses should not be

worn when working with this material. Maintain eye wash fountain and quick-drench facilities in immediate work area.

**SKIN PROTECTION:**

Wear impervious protective clothing; including boots, gloves, lab coat, apron or coveralls to prevent skin contact. Preferred Materials: Nitrile, Neoprene, PVC, Rubber.

**NOTE:**

**ALL PROTECTIVE EQUIPMENT MUST CONFORM WITH 29 CFR 1910.132**

**SECTION 9. DISPOSAL, SPILL OR LEAK PROCEDURES**

**WASTE DISPOSAL METHOD.** Contain and recover liquid when possible. Collect liquid in an appropriate container or absorb with an inert material (e.g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Ensure compliance with local, state and federal regulations.

**STEPS TO BE TAKEN IF MATERIAL IS SPILLED OR RELEASED.** Keep material from flowing to sewers or areas where mixing of other liquids may occur. Ventilate area of leak or spill. Move unprotected personnel upwind out of danger.

**SECTION 10. HANDLING & STORAGE**

Store in a cool, dry ventilated area. Protect against physical damage. Keep separate from acids and organics. Label all pipelines, storage vessels and offload connections.

**SECTION 11. REGULATORY INFORMATION**

**DOT HAZARD CLASS:** Corrosive Material 8

**DOT LABEL:** Corrosive

**DOT PLACARD REQUIRED:** Corrosive – UN 1791

**REPORTABLE QUANTITY:** 100 lbs.

**NFPA / HMIS RATINGS:** Health – 3      Flammability – 0      Reactivity – 0

**TSCA:** All ingredients are listed on the TSCA Inventory

**SARA TITLE III:**

Sara 311 / 312 – Hazard Class – Acute Health Hazard, Reactive Hazard

Sara 313 – Not Listed

Sara 302 – Not Listed

**NSF:** Maximum use for disinfection, oxidation, algicide is (per ANS/NSF Standard 60) = 84 mg/l