



Aqua Chemical Supply, Inc.

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1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Hypochlorite Solution Chemical Name: Sodium Hypochlorite
CAS Number: 7681-52-9
Common Names: Chlorine Bleach, Soda Bleach

Chemical Formula: NaOCl
This Safety Data Sheet (SDS) covers the following materials: Sodium Hypochlorite - Liquid: 15% by volume – 12.5% by weight

Manufacturer: Kuehne Chemical Company, Inc.
86 North Hackensack Avenue
South Kearny, New Jersey 07032-4673
Manufacturer/Supplier/Distributor:
Emergency telephone number: For emergency assistance involving chemicals call CHEMTREC day or night at: 1-800-424-9300

2. HAZARDS IDENTIFICATION



Category 1
Symbol:
Signal Word: Danger

Hazard Statements: May be corrosive to metals
Causes severe skin burns and eye damage
Causes severe eye damage

HMIS HAZARD RATINGS

HEALTH	3
FLAMMABILITY	0
PHYSICAL HAZARD	2
PERSONAL PROTECTION	

NFPA HAZARD RATINGS



Effects of Overexposure

Acute: Inhalation – Inhalation of vapors is irritating to the respiratory system, may cause throat pain and cough, severe respiratory tract irritation and pulmonary edema.

Eyes – May cause severe irritation, burns, and/or corrosion. May cause vision impairment, corneal damage and blurred vision.

Skin – May cause severe irritation and burns or dermatitis.

Prolonged skin exposure may cause destruction of the dermis with impairment of the skin to regenerate at site of contact.

Ingestion – Ingestion of high concentrations may cause injuries to, liver, kidneys, central nervous system and gastrointestinal tract pain and inflammation, burns and perforation of the esophagus or stomach. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea, circulatory collapse, confusion, delirium and coma.

Chronic: Repeated inhalation exposure may cause impairment of lung function and permanent lung damage. Effects from chronic skin exposure would be similar to those from single exposure except for effects secondary to tissue destruction.

Note: Corrosive and strongly irritating to the eyes, skin, and respiratory tract.

Inhalation of fumes may cause pulmonary edema. Ingestion may cause burns to the mouth and digestive tract, and abdominal distress.

Routes of Entry: Inhalation, Eye Contact, Skin, Ingestion

Cancer Information: This product has not been listed as carcinogenic by the following agencies: IARC, NTP, and OSHA

Mutagenicity: Sodium hypochlorite has tested positive in in-vitro test systems and negative in in- vivo test systems. These results are consistent with other germicides.

Medical Conditions Aggravated by Exposure: Asthma, Heart disease, Respiratory disorder

3. COMPOSITION / INFORMATION ON INGREDIENTS

CAS Number	Name	Common Names	Percentage
7732-18-5	Water	Water	VOL. 85.75 – 81.25 WT. 84.37 – 88.13
Exposure Limits			
PEL: Not Established TLV: Not Established STEL: Not Established IDLH: Not Established			
7681-52-9	Hypochlorous Acid, Sodium Salt	Sodium Hypochlorite	VOL.14.25 – 18.75 WT: 11.87 – 15.63
Exposure Limits: PEL: 1 ppm ceiling (as Cl ₂) TLV:1 ppm TWA (as Cl ₂) STEL:1 ppm ceiling (as Cl ₂) IDLH: Not Established			
1310-73-2	Sodium Hydroxide (NaOH)	Caustic Soda, Lye	VOL.1 WT.1
PEL:2 ppm ceiling TLV:2 ppm ceiling STEL: Not Established IDLH: 10 ppm			
7647-14-5	Sodium Chloride (NaCl)	Salt	VOL.>1 WT.>1
PEL: Not Established TLV: Not Established STEL: Not Established IDLH: Not Established			
497-19-8	Carbonic Acid Disodium Salt		VOL. >1 WT. >1
PEL: Not Established TLV: Not Established STEL: Not Established IDLH: Not Established			

Composition comments: All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. FIRST AID MEASURES

Inhalation: Remove to fresh air. If breathing is difficult, have qualified person administer oxygen. If respiration stops, give mouth-to-mouth resuscitation. SEEK MEDICAL ATTENTION IMMEDIATELY.

Eyes: OBJECT IS TO FLUSH MATERIAL OUT IMMEDIATELY AND THEN SEEK MEDICAL ATTENTION. IMMEDIATELY flush eyes with a directed stream of water for at least 15 minutes while forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. Washing eyes within one (1) minute is essential to achieve maximum effectiveness. SEEK MEDICAL ATTENTION IMMEDIATELY.

Ingestion: NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. If swallowed. DO NOT INDUCE VOMITING. Give large quantities of milk. If these are not available, give large

quantities of water. If vomiting occurs spontaneously, keep airway clear and give more milk or water. **SEEK MEDICAL ATTENTION IMMEDIATELY.** Avoid vomiting, lavage or acidic antidotes.

Note to Physician

Sodium Hypochlorite is an alkaline corrosive. For exposure by ingestion do not use emesis, lavage or acidic antidotes. Dilute immediately by giving milk, melted Ice cream, beaten egg white, starch paste or antacids such as milk of magnesia, aluminum hydroxide gel or magnesium trisilicate gel. Avoid sodium bicarbonate because of carbon dioxide release. Sodium thiosulfate solution may prove beneficial by reducing unreacted material. Skin: Flush thoroughly with cool water under shower while removing contaminated clothing and shoes. Discard non-rubber shoes. Wash clothing before reuse. Continue to flush until medical attention arrives. **SEEK MEDICAL ATTENTION IMMEDIATELY.**

5. FIRE FIGHTING MEASURES

Extinguishing Media

Use water spray, fog, foam, dry chemical, or carbon dioxide or agents suitable for materials in surrounding fire. Do not use Mono Ammonium Phosphate (MAP) type extinguishers directly on this product.

Fire Fighting Procedures

Use self-contained breathing apparatus and full protective equipment. Acid contamination will produce very irritating fumes similar to chlorine.

Fire and Explosion Hazard

Sodium Hypochlorite or its solutions decompose when heated. Decomposition products may cause containers to rupture or explode. Vigorous reaction is possible with organic materials or oxidizing agents and may result in fire. May release toxic gases.

6. ACCIDENTAL RELEASE MEASURES

Steps to be Taken if Material is Released or Spilled

Do not allow spilled material to enter sewers or streams. Flush with water to dilute as much as possible and pump into polyethylene containers for disposal. Avoid heat and contamination with acid materials. Do not use combustible materials such as sawdust to absorb Sodium Hypochlorite Solution.

Ventilation Requirements

Provide good general room ventilation plus local exhaust at points of emission.

7. HANDLING AND STORAGE

Handling Precautions

Do not store adjacent to chemicals that may react if spillage occurs. Comply with DOT regulations when shipped. If closed containers become heated, vent to release decomposition products (mainly oxygen under normal decomposition). Do not mix or contaminate with ammonia, hydrocarbons, acids, alcohols or ethers.

Do Not Reuse Containers: Product residues may remain in containers. All labeled precautions must be observed. Dispose of container in a manner meeting government regulations.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Specific Personal Protective Equipment

Respiratory: NIOSH/MSHA approved respirator with N95 (dust, fume, mist) cartridges may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Acid gas cartridges may be required if decomposition products are present. A respiratory protection program that meets 29 CFR 1910.134 must be followed whenever workplace conditions warrant use of a respirator.

Eye: Wear chemical safety goggles plus full face shield to protect against splashing when appropriate.

Gloves: Wear impervious gloves such as rubber, neoprene or vinyl.

Other: Wear impervious protective clothing including rubber safety shoes.

Eye wash facility and emergency shower should be in close proximity

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Colorless to light yellow-green

Odor: Pungent chlorine. like odor
 Odor Threshold (ppm): 0.9 ppm approximate
 Physical State: Liquid.
 pH: 12 @ 100 g/L
 Vapor Pressure: Temperature °F mm Hg PSIA
 48.2 3.7 0.071
 60.8 8.0 0.15
 68.0 12.1 0.23
 89.6 31.1 0.60
 118.4 100.0 1.93
 Boiling Point: (@760 mm Hg) Decomposes above 110 °C (230 °F)
 Freezing/Melting Point: Weight % Freezing Point °F
 10 7 °F
 12 - 3 °F
 14 - 14 °F

Solubility in Water: 100% (by weight)
 Specific Gravity: 1.190 - 1.215 (H₂O = 1)
 Flash Point: N/A
 Auto-ignition Temperature: N/A
 Flammable Limits in Air - % by Volume - Upper: N/A Lower: N/A
 Sensitivity to Mechanical Impact: Not Sensitive
 Sensitivity to Static Discharge: Not Sensitive

10. STABILITY AND REACTIVITY

Conditions Contributing to Instability
 Strong Oxidizer, stability decreases with concentration, heat, light, decrease in pH and contamination by metals.

Incompatibility

Avoid contamination with heavy metals, reducing agents, organics, ether, ammonia, and acids.
 Reacts With: Organics, ammonia and acids.

Hazardous Decomposition Products: Acid fumes, Hydrogen chloride and Chlorine.

Hazardous Polymerization: Material is not known to polymerize.

11. TOXICOLOGICAL INFORMATION

CAS Number Name Common Names
 7681-52-9 Sodium Hypochlorite Bleach
 Acute Oral LD50: (rat) 3-5 mg/kg
 Primary Skin Irritation: (rabbit) > 2 mg/kg

The toxicity and corrosivity of Sodium Hypochlorite is a function of concentration. Industrial grades of higher concentrations than household bleach are more toxic and corrosive.

12. ECOLOGICAL INFORMATION

Aquatic Ecotox Data

Fish: LC50 (96 hr.) (Bluegill sunfish) 2.90 mg/L
 LC50 (96 hr.) (Fathead minnow) 1.40 mg/L
 LC50 (0.5 hr.) (Rainbow trout) 0.90 mg/L

Biodegradation: This material is inorganic and not subject to biodegradation. Persistence: This material is believed not to persist in the environment. Bioconcentration: This material is not expected to bioconcentrate in organisms. This material is harmful to fish, invertebrates, amphibians, and plants

13. DISPOSAL CONSIDERATION

Waste Disposal Method Reduce with agents such as bisulfites or ferrous salt solutions. Some heat will be produced. Keep on alkaline side and dilute with copious amounts of water. Main end product is salt water. Comply with all applicable governmental regulations

Product Disposal Product should be completely removed from containers. Material that cannot be used or chemically reprocessed should be disposed of in a manner meeting government regulations.

14. TRANSPORT INFORMATION

DOT Proper Shipping Name: Hypochlorite Solutions
 DOT Hazard Class: 8
 DOT ID Number: UN1791
 DOT Packing Group: II
 DOT Hazardous Substance: RQ 100# (Sodium Hypochlorite)
 DOT Marine Pollutant: N/A
 Additional Description: N/A

15. REGULATORY INFORMATION

U.S. Federal Regulations

Section 311 of The Clean Water Act lists this product as a hazardous substance, which If discharged to water, may require immediate response to mitigate danger to public health and welfare. Spills of 100 pounds or more must be reported to the National Response Center at the following number:
 1-800-424-8802

Material is contained on a composite list as required under 101 (14) of CERCLA.

Sodium Hypochlorite Solution is regulated by the USEPA under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) as a pesticide product.

OSHA: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200) (US).

TSCA (Toxic Substances Control Act): This product is not subject to export notification.

CERCLA and SARA/Title III:

Hazard Categories: Immediate (Acute) Health: Reactive Hazard:
 Delayed (Chronic) Health: Fire Hazard:
 Sudden Release of Pressure:

This product is registered with the USEPA as a pesticide as required under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA).

Listed on: - The TSCA Inventory, or in compliance with the inventory.

- PA Requirement - 3% or greater.

- NJ Requirement - 1% or greater

- This product has not been listed as carcinogenic by the following agencies: IARC, NTP, and OSHA Other Standards

NSF Certification: This product has been classified as an approved drinking water treatment chemical under ANSI/NSF Standard 60 by Underwriter's Laboratories (reference number: MH17612)

USDA Approvals: B-1, D-2, L-1, Q-4 & Fruit and Vegetable washing compounds.

16. OTHER INFORMATION

Notice

Aqua Chemical Supply, Inc. expressly disclaims all express or implied warranties of merchantability and fitness for a particular purpose, with respect to the product or information provided herein, and shall under no circumstances be liable for incidental or consequential damages.

Do not use ingredient information and/or ingredient percentages in this SDS as a product specification. For product specification information refer to a product specification sheet and/or a certificate of analysis. These can be obtained from your local Aqua Chemical Supply, Inc. sales office.

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