# Safety Data Sheet

## 1. Product Identifier and Company Identification

**Product name** : **Sodium Hypochlorite**
**HBCC SDS number** : CC17000
**Synonym** : Liquid Bleach
**Product use and Restrictions** : Refer to label or call
**Manufacturer Contact Address** :


Corporate Headquarters
Hill Brothers Chemical Company
3000 E. Birch St., Ste 108
Brea, California 92821
714-998-8800
800-821-7234

Corporate Safety & Compliance
Hill Brothers Chemical Company
7121 West Bell Road, Suite 250
Glendale, Arizona 85308
623-535-9955 – Office
623-535-9944 - Fax


**Emergency telephone Number (Chemtrec)** : 800-424-9300
**Website** : https://www.hillbrothers.com

## 2. Hazard Identification

**Classification** :
Skin Corrosion/Irritation – Category 1A
Serious Eye Damage/Eye Irritation – Category 1
Aquatic Toxicity (ACUTE) – Category 1
Aquatic Toxicity (CHRONIC) – Category 3
Corrosive to Metals – Category 1

**Signal Word** : Danger

**Pictogram(s)** :

**Hazard Statements** :
H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H400 Very toxic to aquatic life.
H412 Harmful to aquatic life with long lasting effects.

**Precautionary Statements**

**Response** :
P304+P340+P310 IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor.
P301+P310+P330+P331 IF SWALLOWED: Immediately call a POISON CENTER or doctor. Rinse mouth. Do NOT induce vomiting.
P302+P361+P353+P363+P310 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash

contaminated clothing before reuse. Immediately call a POISON CENTER or doctor.
P305+P351+P338+P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.

**Prevention** : P280 Wear chemical resistant gloves, protective clothing, goggles and/or face shield.
P273 Avoid release to the environment.
P264 Wash thoroughly after handling.
P391 Collect spillage.

**Storage** : P405 Store locked up.
P406 Store in a corrosive resistant container with a resistant inner liner.

**Disposal** : P501 Dispose of contents and container in accordance with all local, regional, national and international regulations.

## 3. Composition/Information on Ingredients

| CAS Number | Ingredient Name | Weight % |
|---|---|---|
| 7681-52-9 | Sodium Hypochlorite | >=5.25% - <=12.5% |
| 1310-73-2 | Sodium Hydroxide | >=0.1% - <=1% |
| 7732-18-5 | Water | >=86.5% - <=94.9% |

**Synonyms/ Common Names** : Liquid Bleach

## 4. First Aid Measures

**Summary of First Aid Measures**

**Ingestion** : Do not give any liquid to an unconscious person. Drink large quantities of gelatin solution if able to swallow. If these are not available, drink large quantities of water. DO NOT give vinegar, baking soda or acidic antidotes. Do not induce vomiting unless directed by a Poison Control Center or Medical Doctor. GET MEDICAL ATTENTION IMMEDIATELY.

**Inhalation** : If adverse effects occur, remove to fresh air. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. If respiration or pulse has stopped, call 911 or an ambulance, have a trained person administer Basic Life Support, Cardio-Pulmonary Resuscitation (CPR) / Automatic External Defibrillator (AED), and GET MEDICAL ATTENTION IMMEDIATELY.

**Skin** : Immediately flush contaminated areas with plenty of water for 15 to 20 minutes. Remove contaminated clothing, jewelry, and shoes immediately. Wash contaminated areas with soap and water. Thoroughly clean and dry contaminated clothing and shoes before reuse. GET MEDICAL ATTENTION IMMEDIATELY.

**Eyes** : Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.

GET MEDICAL ATTENTION IMMEDIATELY. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. Contact lenses should not be worn when working with this chemical.

**Medical Conditions** : N/A

**Effects of Overexposure** : N/A

**Summary of Acute Health Hazards**

**Ingestion** : May cause irritation of the membranes of the mouth and throat, stomach pain, and possible ulceration.

**Inhalation** : May cause burns, cough, pulmonary edema, up to 48 hours after exposure. Avoid breathing vapors.

**Skin** : May cause severe skin irritation and reddening of the skin. Prolonged exposure may cause burns, blistering.

**Eyes** : May cause severe irritation such as burns, and eye damage.

**Note to Physicians** : The absence of visible signs of burns does NOT reliably exclude the presence of actual tissue damage.

**Summary of Chronic Health** : Irritating effects increase with strength of solution and time of exposure.

## 5. Fire Fighting Measures

**Extinguishing** : Use extinguishing agents appropriate for surrounding fire.

**Special Exposure Hazards** : Heat and acid contamination will produce irritating and toxic fumes. May decompose, generating irritating chlorine gas. Move container from fire area if it can be done without risk. Avoid inhalation of material or combustion by -products. Stay upwind and keep out of low areas.

**Special Protective Equipment for Firefighters** : Wear NIOSH approved positive-pressure self-contained breathing apparatus.

**Fire Fighting Procedures** : N/A

**NFPA Rating** : Health - 2
Flammability - 0
Instability - 1


0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme

**Uniform Fire Code Rating** : N/A

## 6. Accidental Release Measures

**Personal Precautions** : Avoid contact with the eyes. Avoid prolonged or repeated contact with the skin.

**Emergency Procedures** : Ventilate the area of the spill or leak. Vacate poorly ventilated areas as soon as possible. Do not return until odors have dissipated.

**Methods of Containment And Clean-Up** : Spills may need to be reported to the National Response Center (800/424 -8802) DOT Reportable Quantity (RQ) is 100 pounds. For large spills, evacuate the hazard area of unprotected personnel. Wear appropriate protective clothing. Dike and contain. Neutralize with sodium sulfite, bisulfite or thiosulfite. Remove with vacuum trucks or pump to storage vessels. Soak up residue with an absorbent such as clay, sand or other suitable material; place in non-leaking containers for proper disposal. Flush area with water to remove trace residue; dispose of flush solutions as above. For small spills, take up with an absorbent material and place in non-leaking containers; seal tightly for proper disposal. This material is alkaline and may raise the pH of surface waters with low buffering capacity.

## 7. Handling and Storage

**Safe Handling** : Mix only with water according to label directions. Mixing this product with gross filth such as feces, urine, etc. or with ammonia, acids, detergents, hydrocarbons, alcohols, ethers or other chemicals will release hazardous gases irritating to the eyes, lungs and mucous membranes.

**Storage** : Store in vented, closed, clean non-corrosive containers in a cool, dry location away from direct sunlight and heat to avoid deterioration. Do not store adjacent to chemicals which may react with the bleach if spillage occurs. If closed containers become heated, the containers should be vented to release decomposition products (mainly oxygen under normal decomposition).

**Work/Hygienic Practices** : Wash hands thoroughly with soap and water before eating, drinking, smoking or using toilet facilities. Do NOT place food, coffee or other drinks in the area where dusting or splashing of solutions is possible.

**Ventilation** : No special ventilation is required unless bleach is exposed to decomposition conditions, i.e., heat or acidic conditions.

## 8. Exposure Controls/Personal Protection

**Occupational Exposure Limits** :

| | Chemical Name: Sodium Hypochlorite | | | |
|---|---|---|---|---|
| | Exposure Limits (TWAs) in Air | | | |
| | **CAS Number** | **ACGIH TLV** | **OSHA PEL** | **STEL** |
| Sodium Hypochlorite | 7681-52-9 | N/A | N/A | 2mg/m³ |
| Sodium Hydroxide | 1310-73-2 | 2mg/m³ | 2mg/m³ | 2mg/m³ |

**Protective Equipment** : Wear chemical-resistant gloves and other clothing as required to minimize contact. Safety showers and eyewash fountains should be available in storage and handling areas.

**Eye Protection** : Wear chemical goggles and/or face shield if there is the likelihood of contact with the eyes.

**Respiratory Protection** : Not required under normal use conditions. In the case of a fire use self-contained breathing apparatus. A NIOSH approved respirator with N95 (dust, fume, mist) filters may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits, or when symptoms have been observed that are indicative of overexposure. When decomposition products exist, acid gas cartridges are also required. A half-piece air-purifying respirator may be used in concentrations up to 10X the acceptable exposure level and a full facepiece air-purifying respirator may be used in concentrations up to 50X the acceptable exposure level.

Supplied air should be used when the level is expected to above 50X the acceptable level, or when there is a potential for uncontrolled release. A respiratory program that meets 29 CFR 1910.134 must be followed whenever workplace conditions warrant use of a respirator.

## 9. Physical and Chemical Properties

| | |
|---|---|
| **Appearance:** Light green to light yellow | **Odor:** Pungent chlorine odor |
| **Odor Threshold:** 0.9 mg/m³ | **pH:** 11.9 - 13 |
| **Melting Point/Freezing Point:** -5 to -25°C | **Initial Boiling Point/Range:** 40-76°C (104-169°F) (Decomposes) |
| **Flash Point:** Nonflammable | **Evaporation Rate (BuAc=1):** N/A |
| **Flammability:** N/A | **Lower/Upper Explosive Limit:** N/A |
| **Vapor Pressure (mmHg):** 12-17 @ 20°C | **Vapor Density (Air=1):** 2.61 |
| **Relative Density:** N/A | **Solubility in Water:** 100% |
| **Partition Coefficient:** N/A | **Autoignition Temperature:** N/A |
| **Decomposition Temperature:** N/A | **Viscosity:** N/A |
| **% Volatiles:** Variable-Water plus products of Decomposition | **Specific Gravity (Water=1):** 1.07-1.26 @ 20°C |
| **Molecular Weight:** 75.45 | **VOC:** N/A |

## 10. Stability and Reactivity

**Reactivity** : The product is stable and non-reactive under normal conditions of use, storage and transport.

**Chemical Stability** : Material is stable under normal conditions.

**Possibility of Hazardous Reactions or Polymerizations** : Hazardous polymerization will not occur

**Conditions to Avoid** : Stability decreases with concentration, heat, light exposure, decrease in pH and contamination with heavy metals, such as nickel, cobalt, copper and iron.

**Incompatible Materials** : Strong acids, oxidizable materials, heavy metals (which act as catalysts), reducing agents, ammonia solutions, ether, and many organic and inorganic chemicals such as paint, kerosene, paint thinners, shellac, grease and oils.

**Hazardous Decomposition Products** : Chlorine. Additional decomposition products which depend upon pH, temperature and time are sodium chloride, sodium chlorate and oxygen.

## 11. Toxicological Information

**Acute and Chronic Effects** : See Section 4

**Routes of Exposure**

- **Inhalation** : Yes
- **Ingestion** : Yes
- **Skin** : Yes
- **Eyes** : Yes

**Symptoms related to Physical, Chemical & Toxicological Characteristics** : Irritating effects increase with strength of solution and time of exposure.

**Numerical Measures of Toxicity** : By ingestion, Grade 1: oral rat $LD_{50}$ = 8.91 g/kg IDLH Value: Data not available

**Chronic Toxicity** : N/A

**Carcinogenicity** : This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

**TARGET ORGANS** : May cause respiratory irritation.

## 12. Ecological Information

**Ecotoxicity** : This pesticide is toxic to fish and aquatic organisms.

**Persistence and Degradability** : N/A

**Bioaccumulative Potential** :

| Product/Ingredient | Log $_{Pow}$ | BCF | Potential |
|---|---|---|---|
| N/A | N/A | N/A | N/A |

**Mobility in Soil** : N/A

## 13. Disposal Considerations

**Disposal of Container** : Do not discharge effluent containing this product into lakes, streams, estuaries, oceans, or public waters unless in accordance with the requirements of the National Pollutant Discharge Elimination System (NPDES) permit and the Permitting Authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.
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. Can be neutralized with weak reducing agents such as sodium sulfite, bisulfite, or thiosulfite (DO NOT USE SULFATES OR BISULFATES). Dispose of in accordance with all applicable local, county, state and federal regulations.

## 14. Transport Information

**UN#** : UN1791
**Proper Shipping Name** : Hypochlorite Solutions
**Hazard Class/Division** : 8
**Packing Group** : III
**Marine Pollutant** : Yes
**Special Precautions** : N/A
**Emergency Response Guidebook** : 2012 ERG, Guide 154, pages 246-247

**Placard Advisory** :

## 15. Regulatory Information

**FIFRA LABEL INFORMATION:**

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and the hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. The following is hazard information as required on the pesticide label:

HAZARDS TO HUMANS AND DOMESTIC ANIMALS: CORROSIVE. Causes irreversible eye damage and skin burns. Do not get in eyes, on skin, or on clothing. Harmful or fatal if swallowed. Applicators and other handlers Must wear: coveralls work over long-sleeved shirt and long pants; Waterproof footwear and gloves; and goggles or face shield. Avoid breathing vapors. Vacate poorly ventilated areas as soon as possible. Do not return until odors have dissipated. Wash hand thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

ENVIRONMENTAL HAZARDS: This pesticide is toxic to fish and aquatic organisms. Do not discharge effluent containing this product into lakes, streams, estuaries, oceans, or public waters unless in accordance with the requirements of the National Pollutant Discharge Elimination Systems (NPDES) permit and the Permitting Authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.

PHYSICAL AND CHEMICAL HAZARDS: STRONG OXIDIZING AGENT: May be corrosive to metals. Mix only with water according to directions for use. Mixing this product with gross filth such as feces, urine, etc., or with ammonia, acids, detergents, or other chemicals will release hazardous gasses irritating to the eyes, lungs, and mucous membranes.

| | | | |
|---|---|---|---|
| **Section 302 Extremely Hazardous Substance (EHS)** | : N/A | **Clean Air Act (CAA)** | : N/A |
| **Section 304 Extremely Hazardous Substance (EHS)** | : N/A | **California Prop 65** | : N/A |
| **CERCLA Hazardous Substance** | : N/A | **Label Warning** | : N/A |
| **Section 313 Supplier Notification** | : N/A | **EPA Registration(s)** | : 266-40; 266-20001; 266-20002; 266-20007 |

**Reportable Quantity** : 100 Pounds (45.4 Kilograms)

Maximum use level for Sodium Hypochlorite under NSF/ANSI Standard 60

| | | |
|---|---|---|
| 5.25% Liquid Bleach | Maximum Use | 200 mg/L |
| 10% Liquid Bleach | Maximum Use | 105 mg/L |
| 12.5% Liquid Bleach | Maximum Use | 84 mg/L |

## 16. Other Information

**Revision date** : 12/10/2020
**Supersedes** : 02/25/2015
**First Issue** : 06/17/1987

**Chemical Family/Type** : Halogen Compound

**Section(s) changed since last revision** : MSDS to First Issue SDS Conversion

**Hazardous Ingredients** : Sodium hypochlorite is manufactured only in solution form. Industrial grade sodium hypochlorite contains from 5.25 - 15% by weight NaOCL (5 – 14.3% available chlorine) with about 0.1-1.00% excess NaOH for stability control.

**IMPORTANT!** Read this SDS before use or disposal of this product. Pass along the information to employees and any other persons who could be exposed to the product to be sure that they are aware of the information before use or other exposure. This SDS has been prepared in accordance with the Globally Harmonized System of Chemical and Labeling of Chemicals (GHS) Fifth Edition and the OSHA Hazard Communication Standard [29 CFR 1910.1200]. The SDS information is based on sources believed to be reliable. Available data, safety standards, and government regulations are subject to change and the conditions of handling and use, or misuse are beyond our control; **Hill Brothers Chemical Company** makes no warranty, either expressed or implied, with respect to the completeness or continuing accuracy of the information contained herein and disclaims all liability for reliance thereon. Additional information may be necessary or helpful for specific conditions and circumstances of use. It is the user's responsibility to determine the suitability of this product and to evaluate risks and exercise appropriate precautions for protection of employees and others prior to use.