



**SODIUM HYPOCHLORITE (ALL GRADES)**

MSDS Revision Date (dd/mm/yyyy): 01/11/2012

**MATERIAL SAFETY DATA SHEET**

**SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION**

**Product identifier** : **SODIUM HYPOCHLORITE (ALL GRADES)**  
**Product Code(s)** : None reported.  
**Product Use** : Disinfectant, bleaching agent, source of available chlorine, deodorizer.  
**Chemical Family** : Bases  
**Supplier's name and address:**  
**FSTI, Inc**  
6300 Bridgepoint Pkwy.  
Suite 1-200  
Austin, TX, USA  
78730  
**Information Telephone No.** : (888) 290-7548  
**24 Hr. Emergency Tel #** : For Chemical Emergency, call SWS Environmental: (877) 742-4215

**Manufacturer's name and address:**  
Refer to Supplier

**SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS**

<b>Ingredients</b>	<b>CAS #</b>	<b>% (weight)</b>	<b>ACGIH TLV</b>		<b>OSHA PEL</b>	
			<b>TWA</b>	<b>STEL</b>	<b>PEL</b>	<b>STEL</b>
Sodium hypochlorite	7681-52-9	7.00 - 13.00	N/Av	2 mg/m <sup>3</sup> (AIHA WEEL)	N/Av	N/Av
Sodium hydroxide	1310-73-2	0.10 - 1.00	2 mg/m <sup>3</sup> (Ceiling)	N/Av	2 mg/m <sup>3</sup>	N/Av

**SECTION 3 - HAZARDS IDENTIFICATION**

**EMERGENCY OVERVIEW**

Clear, yellow-green liquid. Chlorine odour.  
DANGER! Corrosive liquid. Causes severe skin and eye irritation, possible burns on prolonged contact.  
Harmful or fatal if inhaled. Inhalation may cause respiratory tract burns.  
Harmful or fatal if swallowed. May cause chemical burns of the mouth, throat, esophagus and stomach..

**\*\*\*POTENTIAL HEALTH EFFECTS\*\*\***

**Target organs** : Eyes, skin, respiratory system and digestive system.  
**Routes of exposure** : *Inhalation:* YES *Skin Absorption:* NO *Skin & Eyes:* YES *Ingestion:* YES  
**Signs and symptoms of short-term (acute) exposure**  
*Inhalation* : Severely irritating or corrosive. Could result in pulmonary edema (fluid accumulation). Symptoms of pulmonary edema (chest pain, shortness of breath) may be delayed.  
*Skin* : Severely irritating or corrosive. Symptoms may include redness, blistering, pain and swelling. May be harmful if absorbed through the skin.  
*Eyes* : Severely irritating or corrosive. May cause irreversible eye damage. Symptoms may include severe pain, blurred vision, redness and corrosive damage.  
*Ingestion* : Severely irritating or corrosive. Symptoms may include severe abdominal pain, nausea and vomiting.  
**Effects of long-term (chronic) exposure**  
: Prolonged skin contact may cause dermatitis (rash), characterized by red, dry, itching skin. Prolonged exposure may cause eye damage.  
**Conditions aggravated by overexposure**  
: Pre-existing skin, eye and respiratory disorders.  
**Carcinogenic status** : See TOXICOLOGICAL INFORMATION, Section 11.  
**Additional health hazards** : See TOXICOLOGICAL INFORMATION, Section 11.  
**Potential environmental effects**  
: See ECOLOGICAL INFORMATION, Section 12.



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**SECTION 4 - FIRST AID MEASURES**

- Inhalation** : Immediately remove person to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. Obtain medical attention immediately.
- Skin contact** : Immediately remove contaminated clothing and shoes. Flush affected skin with gently flowing lukewarm water for at least 20 minutes. Launder contaminated clothing before reuse, or discard. Obtain medical attention immediately.
- Eye contact** : Flush eyes thoroughly with running water for at least 20 minutes, holding eyelids open to ensure complete flushing. Obtain medical attention immediately.
- Ingestion** : Do not induce vomiting. Never give anything by mouth to an unconscious person. If conscious, give the victim plenty of water to drink. Obtain medical attention immediately.
- Notes For Physician** : Treat symptomatically.

**SECTION 5 - FIRE FIGHTING MEASURES**

**Fire hazards/conditions of flammability**

- : Not flammable under normal conditions of use. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure. Toxic fumes may be released during a fire.

**Flammability classification (OSHA 29 CFR 1910.1200)**

- : Non-flammable.

**Flash point**

- : Non-flammable.

**Flash point method**

- : N/Av

**Auto-ignition temperature**

- : N/Av

**Lower flammable limit (% by vol.)**

- : N/Av

**Upper flammable limit (% by vol.)**

- : N/Av

**Oxidizing properties**

- : None known.

**Flame projection length**

- : N/Av

**Flashback observed**

- : N/Av

**Explosion data: Sensitivity to mechanical impact / static discharge**

- : Not expected to be sensitive to mechanical impact or static discharge.

**Suitable extinguishing media**

- : Use media suitable to the surrounding fire such as water fog or fine spray, alcohol foams, carbon dioxide and dry chemical.

**Special fire-fighting procedures/equipment**

- : Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame.

**Hazardous combustion products**

- : Chlorine; Hydrogen chloride gas; Oxygen; Sodium oxides; Disodium oxide; irritating fumes and smoke.

**NFPA Rating**

0 - Minimal    1 - Slight    2 - Moderate    3 - Serious    4 - Severe

: *Health:* 3    *Flammability:* 0    *Instability:* 1    *Special Hazards:*

**SECTION 6 - ACCIDENTAL RELEASE MEASURES**

**Personal precautions**

- : All persons dealing with clean-up should wear the appropriate protective equipment including self-contained breathing apparatus. Keep all other personnel upwind and away from the spill/release. Restrict access to area until completion of clean-up. Refer to protective measures listed in sections 7 and 8.

**Environmental precautions**

- : Ensure spilled product does not enter drains, sewers, waterways, or confined spaces. For large spills, dike the area to prevent spreading.

**Spill response/cleanup**

- : Ventilate area of release. Remove all sources of ignition. Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand), then place absorbent material into a container for later disposal (see Section 13). Notify the appropriate authorities as required.

**Prohibited materials**

- : None known or reported by the manufacturer.

**Special spill response procedures**



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- : If a spill/release in excess of the EPA reportable quantity is made into the environment, immediately notify the national response center in the United States (phone: 1-800-424-8802).
- US CERCLA Reportable quantity (RQ):
  - sodium hydroxide (1000 lbs / 454 kg)
  - sodium hypochlorite (100 lbs / 45.4 kg)

**SECTION 7 - HANDLING AND STORAGE**

- Safe Handling procedures** : Use in a well-ventilated area. Wear suitable protective equipment during handling. Avoid breathing vapours or mists. Avoid contact with skin, eyes and clothing. Keep away from heat, sparks, and open flames. No sparking tools should be used. Avoid contact with incompatible materials. Do not swallow. Wash thoroughly after handling.
- Storage requirements** : Store in a cool, dry, well-ventilated area. Do not store near acids or other incompatible materials. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. No smoking in the area.
- Incompatible materials** : Strong oxidizing agents; Acids; Amines; Metals; Reducing agents; Methanol; Water.
- Special packaging materials** : Always keep in containers made of the same materials as the supply container.

**SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION**

- Ventilation and engineering measures** : Use in a well-ventilated area. Use general or local exhaust ventilation to maintain air concentrations below recommended exposure limits.
- Respiratory protection** : Respiratory protection is required if the concentrations exceed the TLV. NIOSH-approved respirators are recommended. Advice should be sought from respiratory protection specialists.
- Skin protection** : Impervious gloves must be worn when using this product. Advice should be sought from glove suppliers.
- Eye / face protection** : Chemical splash goggles must be worn when handling this material. A full face shield may also be necessary.
- Other protective equipment** : Wear protective clothing to cover as much of the exposed skin area as possible. An eyewash station and safety shower should be made available in the immediate working area.
- General hygiene considerations** : Avoid breathing vapour or mist. Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Upon completion of work, wash hands before eating, drinking, smoking or use of toilet facilities. Remove soiled clothing and wash it thoroughly before reuse.
- Permissible exposure levels** : For individual ingredient exposure levels, see Section 2.

**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

- |   |  |
|---|--|
| <b>Physical state</b> : liquid                              | <b>Appearance</b> : Clear, yellow-green liquid.      |
| <b>Odour</b> : Chlorine odour.                              | <b>Odour threshold</b> : N/Av                        |
| <b>pH</b> : <12   |  |
| <b>Boiling point</b> : N/Av                                 | <b>Specific gravity</b> : 1.17                       |
| <b>Melting/Freezing point</b> : (approximately) 5°F (-15°C) | <b>Coefficient of water/oil distribution</b> : N/Av  |
| <b>Vapour pressure (mmHg @ 20° C / 68° F)</b> : 12.1 @ 20°C | <b>Solubility in water</b> : completely soluble      |
| <b>Vapour density (Air = 1)</b> : N/Av                      | <b>Evaporation rate (n-Butyl acetate = 1)</b> : N/Av |
| <b>Volatile organic Compounds (VOC's)</b> : N/Av            | <b>Volatiles (% by weight)</b> : N/Av                |

**SECTION 10 - REACTIVITY AND STABILITY DATA**

- Stability and reactivity** : Stable under the recommended storage and handling conditions prescribed. May become unstable at temperatures above 40°C (104°F), in sunlight, and in contact with acids. May slowly decompose in air, releasing chlorine.

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- Hazardous polymerisation** : Will not occur.
- Conditions to avoid** : Avoid contact with incompatible materials.
- Materials to avoid and incompatibility** : See Section 7 (Handling and Storage) for further details.
- Hazardous decomposition products** : Solutions slowly decompose with air to form chlorine gas.

**SECTION 11 - TOXICOLOGICAL INFORMATION**

**Toxicological data** : See below for individual ingredient acute toxicity data.

<u>Ingredients</u>	<u>LC<sub>50</sub>(4hr)</u> <u>Inh, rat</u>	<u>LD<sub>50</sub></u>	
		<u>Oral</u>	<u>Dermal</u>
Sodium hypochlorite	> 5250 mg/m <sup>3</sup>	8910 mg/kg	> 10,000 mg/kg
Sodium hydroxide	N/Av	N/Av	N/Av

- Carcinogenic status** : Not known to be carcinogenic.
- Reproductive effects** : Not expected to have other reproductive effects.
- Teratogenicity** : Not expected to be a teratogen.
- Mutagenicity** : Not expected to be mutagenic in humans.
- Epidemiology** : Not available.
- Sensitization to material** : Not expected to be a skin or respiratory sensitizer.
- Synergistic materials** : None known or reported by the manufacturer.
- Irritancy** : Corrosive to all tissues.
- Other important hazards** : See Section 3 for additional information.


**SECTION 12 - ECOLOGICAL INFORMATION**

- Environmental effects** : The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters. No data is available on the product itself.
- Important environmental characteristics** : No data is available on the product itself.
- Ecotoxicological** : No data is available on the product itself.

**SECTION 13 - DISPOSAL CONSIDERATIONS**

- Handling for disposal** : Handle waste according to recommendations in Section 7. Empty containers retain residue (liquid and/or vapour) and can be dangerous.
- Methods of disposal** : Dispose in accordance with all applicable federal, state, provincial and local regulations. Contact your local, state, provincial or federal environmental agency for specific rules.
- RCRA** : If this product, as supplied, becomes a waste in the United States, it may meet the criteria of a hazardous waste as defined under RCRA, Title 40 CFR 261. It is the responsibility of the waste generator to determine the proper waste identification and disposal method. For disposal of unused or waste material, check with local, state and federal environmental agencies.

**SECTION 14 - TRANSPORTATION INFORMATION**

<b>Regulatory Information</b>	<b>UN Number</b>	<b>Shipping Name</b>	<b>Class</b>	<b>Packing Group</b>	<b>Label</b>
49CFR/DOT	UN1791	HYPOCHLORITE SOLUTION	8	III	
<b>49CFR/DOT Additional information</b>	None.				



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TDG	UN1791	HYPOCHLORITE SOLUTION	8	III	
<b>TDG Additional information</b>	None.				

**SECTION 15 - REGULATORY INFORMATION**

**US Federal Information:**

OSHA: This material is classified as hazardous under OSHA regulations (29CFR 1910.1200).

TSCA: All listed ingredients appear on the Toxic Substances Control Act (TSCA) inventory.

CERCLA Reportable Quantity (RQ) (40 CFR 117.302): See Section 6

SARA TITLE III: Sec. 302, Extremely Hazardous Substances, 40 CFR 355: No Extremely Hazardous Substances are present in this material.

SARA TITLE III: Sec. 311 and 312, MSDS Requirements, 40 CFR 370 Hazard Classes: Immediate (Acute) health hazard; Chronic Health Hazard. Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds for the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

SARA TITLE III: Sec. 313, Toxic Chemicals Notification, 40 CFR 372: This material is not subject to SARA notification requirements, since it does not contain any Toxic Chemical constituents above de minimus concentrations.

**US State Right to Know Laws:**

New Jersey Labeling Requirements: This product contains the following substances required to be disclosed on product labeling: Water (CAS # 7732-18-5); sodium hypochlorite (CAS# 7681-52-9); sodium hydroxide (CAS# 1310-73-2).

California Proposition 65: To the best of our knowledge, this product does not contain any chemicals known to the State of California to cause cancer or reproductive harm.

**International Information:**

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on the Domestic Substances List (DSL).

Canadian WHMIS Classification:

Class E (Corrosive Material)

***This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and this MSDS contains all the information required by the CPR.***

**SECTION 16 - OTHER INFORMATION**

**HMIS Rating** : \* - Chronic hazard 0 - Minimal 1 - Slight 2 - Moderate 3 - Serious 4 - Severe  
*Health: \*3 Flammability: 0 Reactivity: 1*

**Legend** : ACGIH: American Conference of Governmental Industrial Hygienists  
 AIHA: American Industrial Hygiene Association  
 CAS: Chemical Abstract Services  
 CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980  
 CFR: Code of Federal Regulations  
 DOT: Department of Transportation  
 EPA: Environmental Protection Agency  
 EST: Eastern Standard Time  
 HMIS: Hazardous Materials Identification System  
 HSDB: Hazardous Substances Data Bank  
 IARC: International Agency for Research on Cancer  
 Inh: Inhalation  
 LC: Lethal Concentration  
 LD: Lethal Dose  
 N/Ap: Not Applicable  
 N/Av: Not Available





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NIOSH: National Institute of Occupational Safety and Health  
 OSHA: Occupational Safety and Health Administration  
 PEL: Permissible exposure limit  
 RCRA: Resource Conservation and Recovery Act  
 RTECS: Registry of Toxic Effects of Chemical Substances  
 SARA: Superfund Amendments and Reauthorization Act  
 STEL: Short Term Exposure Limit  
 TLV: Threshold Limit Values  
 TWA: Time Weighted Average  
 TSCA: Toxic Substance Control Act  
 WEEL: Workplace Environmental Exposure Level  
 WHMIS: Workplace Hazardous Materials Identification System

**References**

- : 1. ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices for 2012.
- 2. International Agency for Research on Cancer Monographs, searched 2012.
- 3. Canadian Centre for Occupational Health and Safety, CCInfoWeb databases, 2012 (Chempendium, HSDB and RTECs).
- 4. Material Safety Data Sheets from manufacturer.
- 5. US EPA Title III List of Lists - July 2011 version.
- 6. California Proposition 65 List - July 20, 2012 version.

<p><b>Prepared for:</b>          FSTI, Inc          6300 Bridgepoint Pkwy Suite 1-200          Austin, TX, USA 78730          Tel. (888) 290-7548          Please direct all enquiries to FSTI.</p>	
<p><b>Prepared by:</b>          ICC The Compliance Center Inc.  <a href="http://www.thecompliancecenter.com">http://www.thecompliancecenter.com</a></p>	

**DISCLAIMER OF LIABILITY**

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**Revision Information**

: (M)SDS sections updated: 1. Product and Company Identification

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