

## 1. Identification

<b>Product identifier</b>	<b>Sodium Hypochlorite, 5 - 17%</b>	
<b>Other means of identification</b>		
<b>SDS number</b>	10000022	
<b>Synonyms</b>	L.T. Sanitizer 5.25%, Hypo, Liquid Bleach, Bleach, Hypochlorite, Javel Water.	
<b>Recommended use</b>	Swimming pool chlorinator, hard surface cleaner, mildecide, Water treatment chemical, Biocides, bleach solutions and bleach fixer solutions	
<b>Recommended restrictions</b>	None known.	
<b>Manufacturer/Importer/Supplier/Distributor information</b>		
<b>Company name</b>	Olin Chlor Alkali Products	
<b>Address</b>	490 Stuart Road, NE Cleveland, TN 37312	
<b>Company name</b>	Pioneer Americas, LLC (d/b/a Olin Chlor Alkali Products)	
<b>Address</b>	490 Stuart Road, NE Cleveland, TN 37312	
<b>Company name</b>	Olin Canada ULC (d/b/a Olin Chlor Alkali Products)	
<b>Address</b>	2020 Robert-Bourassa Blvd., Suite 2190 Montreal, Quebec H3A 2A5	
<b>General Information</b>		
<b>Telephone</b>	(888) 658-6SDS (737)	
<b>Website</b>	olinchloralkali.com	
<b>Contact person</b>	ORC SDS Control Group	
<b>Emergency phone number</b>	CHEMTREC	
	US: 1-800-424-9300	Canada: 1-800-567-7455

## 2. Hazard(s) identification

<b>Physical hazards</b>	Corrosive to metals	Category 1
<b>Health hazards</b>	Skin corrosion/irritation	Category 1
	Serious eye damage/eye irritation	Category 1
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
<b>Environmental hazards</b>	Hazardous to the aquatic environment, acute hazard	Category 1
	Hazardous to the aquatic environment, long-term hazard	Category 2
<b>OSHA defined hazards</b>	Not classified.	
<b>Label elements</b>		



**Signal word**

Danger

**Hazard statement**

May be corrosive to metals. Causes severe skin burns and eye damage. May cause respiratory irritation. Very toxic to aquatic life with long lasting effects.

## Precautionary statement

### Prevention

Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe mist or vapor. Use only outdoors or in a well-ventilated area. Wash thoroughly after handling. Keep only in original container. Avoid release to the environment.

### Response

If swallowed: Rinse mouth. Do NOT induce vomiting. If inhaled: Remove person to fresh air and keep comfortable for breathing. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. 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/doctor. Wash contaminated clothing before reuse. Absorb spillage to prevent material damage. Collect spillage.

### Storage

Store in a well-ventilated place. Keep container tightly closed. Store locked up. Store in corrosive resistant container with a resistant inner liner.

### Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

### Hazard(s) not otherwise classified (HNOC)

None known.

### Supplemental information

Contact with acids liberates toxic gas.

## 3. Composition/information on ingredients

### Mixtures

Chemical name	CAS number	%
Sodium hypochlorite	7681-52-9	5-17
Sodium hydroxide	1310-73-2	0.10-4.25

## 4. First-aid measures

### Inhalation

Move to fresh air. Call a physician if symptoms develop or persist.

### Skin contact

Take off immediately all contaminated clothing. Wash off IMMEDIATELY with plenty of water for at least 15-20 minutes. Get medical attention immediately. Wash contaminated clothing before reuse. Call a physician or poison control center immediately.

### Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

### Ingestion

Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

### Most important symptoms/effects, acute and delayed

Corrosive effects. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

### Indication of immediate medical attention and special treatment needed

Treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. With eye exposure, continue flushing during transport to hospital.

### General information

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

## 5. Fire-fighting measures

### Suitable extinguishing media

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO<sub>2</sub>).

### Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire. Do not use dry extinguishing media that contains ammonium compounds.

### Specific hazards arising from the chemical

During fire, gases hazardous to health may be formed.

### Special protective equipment and precautions for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

### Fire fighting equipment/instructions

In case of fire and/or explosion do not breathe fumes. Use standard firefighting procedures and consider the hazards of other involved materials.

### General fire hazards

No unusual fire or explosion hazards noted.

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Wear appropriate personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Absorb spillage to prevent material damage. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see Section 8 of the SDS.

**Methods and materials for containment and cleaning up**

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills in original containers for re-use. For waste disposal, see Section 13 of the SDS. Do not discharge into drains, water courses or onto the ground.

**Environmental precautions**

**7. Handling and storage**

**Precautions for safe handling**

Wear appropriate personal protective equipment. Do not get in eyes, on skin, on clothing. Use with adequate ventilation. Observe good industrial hygiene practices. Do not apply heat or direct sunlight. Temperature and product concentration affect product quality and decomposition rates.

**Conditions for safe storage, including any incompatibilities**

Keep container tightly closed. Store in a cool and well-ventilated place. Store in a corrosive resistant container. Consult container manufacturer for additional guidance. Store away from and do not mix with incompatible materials such as acids, oxidizers, organics, reducing agents, and all metals except titanium.

**8. Exposure controls/personal protection**

**Occupational exposure limits**

**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

Components	Type	Value
Sodium hydroxide (CAS 1310-73-2)	PEL	2 mg/m3

**US. ACGIH Threshold Limit Values**

Components	Type	Value
Sodium hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m3

**US. NIOSH: Pocket Guide to Chemical Hazards**

Components	Type	Value
Sodium hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m3

**US. Workplace Environmental Exposure Level (WEEL) Guides**

Components	Type	Value
Sodium hypochlorite (CAS 7681-52-9)	STEL	2 mg/m3

**Biological limit values**

No biological exposure limits noted for the ingredient(s).

**Appropriate engineering controls**

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection**

Wear goggles (or safety glasses with side shields) and a face shield. Wear a full-face respirator, if needed. PPE requirements should match type and amount used as determined by the end users PPE hazard assessment.

**Skin protection**

**Hand protection**

Wear appropriate chemical resistant gloves.

**Skin protection**

**Other**

Wear appropriate chemical resistant clothing. Reports indicate that sodium hypochlorite can react with various fabrics usually increasing with concentration. Reactions vary significantly depending on strength of chemical, material, fabric treatment and color of dyes. FRC treated cotton has a stronger response than plain cotton. Poly blend fabrics and meta aramid fabric have a weaker response than natural fibers. Contact the Personal Protective Equipment manufacturer for specific information about their products.

<b>Respiratory protection</b>	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.
<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.
<b>General hygiene considerations</b>	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical and chemical properties

### Appearance

<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid.
<b>Color</b>	Not available.
<b>Odor</b>	Pungent.
<b>Odor threshold</b>	0.9 mg/m <sup>3</sup>
<b>pH</b>	12 - 14 (25 °C/77 °F)
<b>Melting point/freezing point</b>	-4 °F (-20 °C) (7% solution)
<b>Initial boiling point and boiling range</b>	Not available.
<b>Flash point</b>	Not applicable.
<b>Evaporation rate</b>	No data available
<b>Flammability (solid, gas)</b>	Not available.

### Upper/lower flammability or explosive limits

<b>Flammability limit - lower (%)</b>	Not applicable.
<b>Flammability limit - upper (%)</b>	Not applicable.
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	12 mm Hg (20°C/68°F)
<b>Vapor density</b>	Not available.
<b>Relative density</b>	1.209 g/ml (at 12.5%*)

### Solubility(ies)

<b>Solubility (water)</b>	Completely miscible
<b>Partition coefficient (n-octanol/water)</b>	Not available.

**Auto-ignition temperature** Not applicable.

**Decomposition temperature** Not available.

**Viscosity** Not available.

### Other information

\* Density at 12.5% is approximately 1.209 g/mL and will vary with factors such as sodium chloride and alkalinity content. Density varies in an approximately linear relationship with strength when manufactured. The relationship between density and strength will change with time due to product decomposition.

**Bulk density** Not applicable.

**Molecular formula** NaOCl

**Molecular weight** 74.5 g/mol

## 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** Hazardous polymerization does not occur.

**Conditions to avoid** Contact with incompatible materials. Avoid ultraviolet (UV) light sources. Excessive heat. Reacts violently with strong acids. Acid contact will produce chlorine gas. Amine contact will produce chloramines.

**Incompatible materials** Strong oxidizing agents. Acids. Metals. Organic compounds. Ammonia.  
**Hazardous decomposition products** No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

**Inhalation** Vapors and spray mist may irritate throat and respiratory system and cause coughing.  
**Skin contact** Causes skin burns.  
**Eye contact** Causes eye burns.  
**Ingestion** Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Ingestion may produce burns to the lips, oral cavity, upper airway, esophagus and possibly the digestive tract.

### Symptoms related to the physical, chemical and toxicological characteristics

Corrosive effects. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

### Information on toxicological effects

**Acute toxicity** Occupational exposure to the substance or mixture may cause adverse effects.

Product	Species	Test Results
Sodium Hypochlorite, 5 - 17% (CAS Mixture)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 2 g/kg
<i>Oral</i>		
LD50	Rat	3 - 5 g/kg

**Skin corrosion/irritation** Causes severe skin burns and eye damage.

**Serious eye damage/eye irritation** Causes serious eye damage.

### Respiratory or skin sensitization

**Respiratory sensitization** This product is not expected to cause respiratory sensitization.

**Skin sensitization** This product is not expected to cause skin sensitization.

**Germ cell mutagenicity** No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

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

#### IARC Monographs. Overall Evaluation of Carcinogenicity

Sodium hypochlorite (CAS 7681-52-9) 3 Not classifiable as to carcinogenicity to humans.

#### NTP Report on Carcinogens

Not listed.

#### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

**Reproductive toxicity** This product is not expected to cause reproductive or developmental effects.

**Specific target organ toxicity - single exposure** May cause respiratory irritation.

**Specific target organ toxicity - repeated exposure** Not classified.

**Aspiration hazard** Not classified, however droplets of the product may be aspirated into the lungs through ingestion or vomiting and may cause a serious chemical pneumonia.

**Chronic effects** Prolonged or repeated overexposure causes lung damage.

**Further information** Prolonged inhalation may be harmful.

## 12. Ecological information

**Ecotoxicity** Very toxic to aquatic life with long lasting effects.

Product	Species		Test Results
Sodium Hypochlorite, 5 - 17%			
<b>Aquatic</b>			
Crustacea	LC50	Daphnia	1 mg/l
Fish	LC50	Bluegill (Lepomis macrochirus)	0.6 mg/l, 48 hours
<b>Persistence and degradability</b>	No data is available on the degradability of this product.		
<b>Bioaccumulative potential</b>	No data available for this product.		
<b>Mobility in soil</b>	Not available.		
<b>Other adverse effects</b>	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.		

### 13. Disposal considerations

<b>Disposal instructions</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues / unused products</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
<b>Contaminated packaging</b>	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

### 14. Transport information

#### DOT

<b>UN number</b>	UN1791
<b>UN proper shipping name</b>	Hypochlorite solutions
<b>Transport hazard class(es)</b>	
<b>Class</b>	8
<b>Subsidiary risk</b>	-
<b>Label(s)</b>	8
<b>Packing group</b>	III
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling. Read safety instructions, SDS and emergency procedures before handling.
<b>Special provisions</b>	IB3, N34, T4, TP2, TP24
<b>Packaging exceptions</b>	154
<b>Packaging non bulk</b>	203
<b>Packaging bulk</b>	241

#### IATA

<b>UN number</b>	UN1791
<b>UN proper shipping name</b>	Hypochlorite solution
<b>Transport hazard class(es)</b>	
<b>Class</b>	8
<b>Subsidiary risk</b>	-
<b>Label(s)</b>	8
<b>Packing group</b>	III
<b>Environmental hazards</b>	Yes
<b>ERG Code</b>	8L
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling. Read safety instructions, SDS and emergency procedures before handling.

#### IMDG

<b>UN number</b>	UN1791
<b>UN proper shipping name</b>	HYPOCHLORITE SOLUTION
<b>Transport hazard class(es)</b>	
<b>Class</b>	8
<b>Subsidiary risk</b>	-
<b>Label(s)</b>	8

**Packing group** III  
**Environmental hazards**  
**Marine pollutant** Yes  
**EmS** F-A, S-B  
**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling. Read safety instructions, SDS and emergency procedures before handling.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

## 15. Regulatory information

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.  
All components are on the U.S. EPA TSCA Inventory List.

CERCLA Hazardous Substance: Sodium Hypochlorite, CAS # 7681-52-9, RQ = 100 lbs  
CERCLA Hazardous Substance: Sodium Hydroxide, CAS # 1310-73-2, RQ = 1000 lbs.

### **TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

### **OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not regulated.

### **CERCLA Hazardous Substance List (40 CFR 302.4)**

Sodium hydroxide (CAS 1310-73-2) LISTED  
Sodium hypochlorite (CAS 7681-52-9) LISTED

### **Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories** Immediate Hazard - Yes  
Delayed Hazard - No  
Fire Hazard - No  
Pressure Hazard - No  
Reactivity Hazard - No

### **SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical** Yes

### **SARA 313 (TRI reporting)**

Not regulated.

### **Other federal regulations**

#### **Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

#### **Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.

### **US state regulations**

#### **US. Massachusetts RTK - Substance List**

Sodium hydroxide (CAS 1310-73-2)  
Sodium hypochlorite (CAS 7681-52-9)

#### **US. New Jersey Worker and Community Right-to-Know Act**

Sodium hydroxide (CAS 1310-73-2)  
Sodium hypochlorite (CAS 7681-52-9)

#### **US. Pennsylvania Worker and Community Right-to-Know Law**

Sodium hydroxide (CAS 1310-73-2)  
Sodium hypochlorite (CAS 7681-52-9)

#### **US. Rhode Island RTK**

Sodium hydroxide (CAS 1310-73-2)  
Sodium hypochlorite (CAS 7681-52-9)

## US. California Proposition 65

This product is not listed, but it may contain elements known to the State of California to cause cancer or reproductive toxicity as listed under Proposition 65 Safe Drinking Water and Toxic Enforcement Act. For additional information, contact Olin Technical Services (800-299-6546).

### International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other information, including date of preparation or last revision

**Issue date** 27-February-2014

**Revision date** 08-March-2016

**Version #** 06

**HMIS® ratings**  
Health: 3  
Flammability: 0  
Physical hazard: 0

**List of abbreviations** LD50: Lethal Dose, 50%.

LC50: Lethal Concentration, 50%.  
EC50: Effective Concentration, 50%.  
TWA: Time weighted average.

**References**  
EPA: AQUIRE database  
HSDB® - Hazardous Substances Data Bank  
US. IARC Monographs on Occupational Exposures to Chemical Agents  
IARC Monographs. Overall Evaluation of Carcinogenicity  
ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices

**Disclaimer** This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.