

## SAFETY DATA SHEET

This SDS adheres to the standards and regulatory requirements of the United States and may not meet the regulatory requirements in other countries.

### 1. Identification

<b>Product identifier</b>	<b>Sodium Hypochlorite, 17-30%</b>
<b>Other means of identification</b>	Hypo, Liquid Bleach, Soda Bleach, Bleach
<b>Recommended use</b>	Swimming pool sanitizer, bleach for textiles, wood pulp and in effluent treatment, Water treatment chemical.
<b>Recommended restrictions</b>	None known
<b>Manufacturer/Importer/Supplier/Distributor information</b>	
<b>Manufacturer</b>	
<b>Company name</b>	ERCO Worldwide
<b>Address</b>	302 The East Mall Suite 200 Toronto, ON M9B 6C7 Canada
<b>Telephone</b>	(416) 239-7111 (M- F: 8:00 am – 5:00pm EST)
<b>Website</b>	<a href="http://www.ercoworldwide.com">http://www.ercoworldwide.com</a>
<b>E-mail</b>	productinfo@ercoworldwide.com
<b>Emergency phone number</b>	Canada: 613-996-6666 (CANUTEC) USA: 1-800-424-9300 (CHEMTREC)
<b>Supplier</b>	Refer to Manufacturer

### 2. Hazard(s) Identification

<b>Physical hazards</b>	Corrosive to metals	Category 1
<b>Health hazards</b>	Skin corrosion	Category 1
	Serious eye damage	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	

#### Label elements



<b>Signal word</b>	Danger
<b>Hazard statement</b>	<p>May be corrosive to metals.          Causes severe skin burns and eye damage.          May cause respiratory irritation.          Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.</p>
<b>Precautionary statement</b>	
<b>Prevention</b>	<p>Keep only in original container. Do not breathe dusts, fume, gas, mist, vapors, spray. Wash hands and face thoroughly after handling. Wear protective gloves, protective clothing, eye protection, face protection. Use only outdoors or in a well-ventilated area. Avoid release to the environment.</p>
<b>Response</b>	<p>Immediately call a POISON CENTER or doctor/physician.</p> <p>IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.          IF ON SKIN (OR HAIR): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.          IF INHALED: Remove person to fresh air and keep comfortable for breathing.          IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>Absorb spillage to prevent material damage.</p>
<b>Storage</b>	<p>Store in corrosive resistant container with a resistant inner liner. Store locked up. Store in a well-ventilated place.</p>
<b>Disposal</b>	<p>Dispose of contents/container in accordance with local/regional/national/international regulations.</p>
<b>Hazard(s) not otherwise classified (HNOC)</b>	None known.
<b>Supplemental information</b>	Contact with acids liberates toxic gas.

### 3. Composition/Information on Ingredients

Chemical name	Common name and synonyms	CAS number	Conc. % By Weight
Sodium Hypochlorite		7681-52-9	17-30 w/w%
Sodium Hydroxide		1310-73-2	1-5 w/w%

#### 4. First-Aid Measures

<b>Inhalation</b>	Move to fresh air. Call a physician or poison control center immediately. If breathing is difficult, trained personnel should give oxygen. If breathing stops, provide artificial respiration. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
<b>Skin Contact</b>	Take off immediately all contaminated clothing. Immediately flush skin with running water for at least 20 minutes. Cover wound with sterile dressing. Do not rub area of contact. Wash contaminated clothing before reuse. Leather and shoes that have been contaminated with the solution may need to be destroyed. Call a physician or poison control center immediately.
<b>Eye Contact</b>	Immediately flush eyes with plenty of water for at least 20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Take care not to rinse contaminated water into the unaffected eye or onto the face. Call a physician or poison control center immediately.
<b>Ingestion</b>	If swallowed: Rinse mouth. Do NOT induce vomiting. If vomiting occurs, keep head low so stomach content doesn't get into the lungs. Never give anything by mouth to a victim who is unconscious or is having convulsions. Call a physician or poison control center immediately.
<b>Most important symptoms/effects, acute and delayed</b>	Corrosive effects. Symptoms may include stinging, tearing, redness, swelling and blurred vision. Permanent eye damage including blindness could result.
<b>Indication of immediate medical attention and special treatment needed</b>	Treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital.
<b>General information</b>	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

<b>Suitable extinguishing media</b>	Use as appropriate: Water Fog. Alcohol resistant foam. Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire. Do not use dry extinguishing media that contains ammonium compounds.
<b>Specific hazards arising from the chemical</b>	During fire, gases hazardous to health may be formed.

<b>Special protective equipment and precautions for firefighters</b>	Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. A full-body chemical resistant suit should be worn.
<b>Firefighting equipment/instructions</b>	In case of fire and/or explosion, do not breathe fumes. Use standard firefighting procedures and consider the hazards of other involved materials.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.

## 6. Accidental Release Measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Immediately evacuate personnel to safe areas. Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. For personal protection, see section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	<p>Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.</p> <p>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 for later disposal. Following product recovery, flush area with water.</p> <p>Never return spills to original containers for re-use. Contaminated absorbent material may pose the same hazards as the spilled product. For waste disposal, see section 13 of the SDS.</p>
<b>Environmental precautions</b>	Do not discharge into drains, water courses or onto the ground. Contact local authorities in case of spillage to drain/aquatic environment.

## 7. Handling and Storage

<b>Precautions for safe handling</b>	Wear chemically resistant protective equipment during handling. Wear protective gloves/clothing and eye/face protection. Avoid contact with eyes, skin and clothing. Do not apply heat or direct sunlight. Chemical attack increases with solution strength. Use with adequate ventilation. Observe good Industrial hygiene practices. Temperature and product concentration affect product quality and decomposition rates.
--------------------------------------	--

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

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. For frozen product, contact manufacturer for guidance.

## 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/m <sup>3</sup>

**US. ACGIH Threshold Limit Values**

Components	Type	Value
Sodium Hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m <sup>3</sup>

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

Components	Type	Value
Sodium Hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m <sup>3</sup>

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

Components	Type	Value
Sodium Hypochlorite (CAS 7681-52-9)	STEL	2 mg/m <sup>3</sup>

**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 showers must be available when handling this product.

**Individual protection measures, such as personal protective equipment**
**Eye/face protection**

Wear safety glasses with side shields (or goggles) and a face shield.  
Wear a full-face respirator, if needed.

**Skin protection**
**Hand protection**

Wear appropriate chemical resistant gloves.

**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 fabrics 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

<b>Appearance</b>	
Physical state	Liquid
Form	Liquid
Colour	Yellow to greenish
<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>	-17°F (-27.22°C) (16% 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
<b>Upper/lower flammability or explosive limits</b>	
Flammability limit – lower (%)	Not applicable
Flammability limit – upper (%)	Not applicable
Explosive limit – lower (%)	Not applicable
Explosive limit – upper (%)	Not applicable
Vapor pressure	12 mm Hg (12.5% solution)
Vapor density	Not available
Relative density	Not available
Relative density temperature	Not available
<b>Solubility (ies)</b>	
Solubility (water)	Completely miscible.
<b>Partition coefficient (n-octanol/water)</b>	Not available
<b>Auto-ignition temperature</b>	Not applicable
<b>Decomposition temperature</b>	Not available
<b>Viscosity</b>	Not available
<b>Other information</b>	

<b>Bulk Density</b>	Not applicable
<b>Molecular weight</b>	74.5 g/mol

## 10. Stability and Reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.
<b>Conditions to Avoid</b>	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 product chloramines.
<b>Incompatible materials</b>	Strong oxidizing agents. Acids. Metals. Organic compounds. Ammonia.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.

## 11. Toxicological Information

### Information on likely routes of exposure

<b>Inhalation</b>	Vapors and spray mist may irritate throat and respiratory system and cause coughing.
<b>Skin contact</b>	Causes severe skin burns.
<b>Eye contact</b>	Causes serious eye damage.
<b>Ingestion</b>	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.

<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	Corrosive effects. Symptoms may include stinging, tearing, redness, swelling and blurred vision. Permanent eye damage including blindness could result.
---	---

### Information on toxicological effects

<b>Acute toxicity</b>	Occupational exposure to the substance or mixture may cause adverse effects.
-----------------------	--

<b>Components</b>	<b>Species</b>	<b>Test Results</b>
Sodium hypochlorite Solution 17%-30% (CAS Mixture)		
<i>Dermal</i>		
LD <sub>50</sub>	Rabbit	>2 g/kg
<i>Oral</i>		
LD <sub>50</sub>	Rat	3 – 5 g/kg

\* Estimates for product may be based on additional component data not shown.

**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** No data available.

**Skin sensitizer** No data available.

**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.

**Reproductive toxicity** No data available.

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

**Specific target organ toxicity - repeated exposure** No data available.

**Aspiration toxicity** No 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. Toxic to aquatic life with long lasting effects.

Components	Species	Test Results
Sodium hypochlorite. 17-30% (CAS Mixture)		
<b>Aquatic</b>		
<i>Acute</i>		
Fish	LC <sub>50</sub>	Bluegill ( <i>Lepomis macrochirus</i> )
		<i>Oncorhynchus mykiss</i>
		<i>Pimephales promelas</i>
		2.9 mg/l, 96 hours
		0.9 mg/l, 0.5 hours
		1.4 mg/l, 96 hours

\* Estimates for product may be based on additional component data not shown.

**Persistence and degradability** No data is available on the degradability of this product.

**Bio accumulative potential** No data available for this product.

**Mobility in soil** No data available.

**Other adverse effects** 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

**Disposal instructions** 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.

**Local disposal regulations** Dispose in accordance with all applicable regulations.

**Hazardous waste code** The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**Waste from residues / unused products** 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).

**Contaminated packaging** 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>	UN 1791
<b>UN proper shipping name</b>	Hypochlorite solutions
<b>Transport hazard class(es)</b>	
<b>Class</b>	8
<b>Subsidiary risk</b>	-
<b>Packing group</b>	III
<b>Special precautions for user</b>	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>	UN 1791
<b>UN proper shipping name</b>	HYPOCHLORITE SOLUTION
<b>Transport hazard class(es)</b>	
<b>Class</b>	8
<b>Subsidiary risk</b>	-
<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.

### IMDG

<b>UN number</b>	UN 1791
<b>UN proper shipping name</b>	HYPOCHLORITE SOLUTION
<b>Transport hazard class(es)</b>	
<b>Class</b>	8
<b>Subsidiary risk</b>	-
<b>Packing group</b>	III
<b>Environmental hazards</b>	
<b>Marine pollutant</b>	Yes
<b>EmS</b>	F-A, S-B
<b>Special precautions for user</b>	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. Not regulated.

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

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

**U.S. OSHA  
Specifically  
Regulated  
Substances (29 CFR  
1910.1001-1050)**

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

Not 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  
SARA 313 (TRI  
reporting)**

Yes  
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**

<b>US. Massachusetts RTK - Substance List</b>	Sodium hydroxide (CAS 1310-73-2) Sodium hypochlorite (CAS 7681-52-9)
<b>US. New Jersey Worker and Community Right- to-Know Act</b>	Sodium hydroxide (CAS 1310-73-2) Sodium hypochlorite (CAS 7681-52-9)
<b>US. Pennsylvania Worker and Community Right- to-Know Law</b>	Sodium hydroxide (CAS 1310-73-2) Sodium hypochlorite (CAS 7681-52-9)
<b>US. Rhode Island RTK</b>	Sodium hydroxide (CAS 1310-73-2) Sodium hypochlorite (CAS 7681-52-9)
<b>US. California Proposition 65</b>	California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.
<b>US. California Proposition 65 – Carcinogens &amp; Reproductive Toxicity (CRT): Listed substance</b>	Not listed.

**International Inventories**

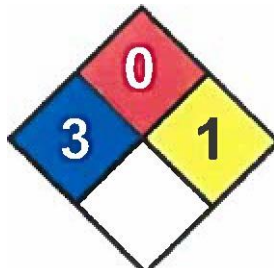
<b>Country(s) or region</b>	<b>Inventory name</b>	<b>On inventory (yes/no)*</b>
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
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 that all components of this product comply 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**

**Issue date** 3/28/2018  
**Revision #** 2  
**Revision Indicator** New layout of Safety Data Sheet.  
**NFPA Ratings**



**List of abbreviations** LD<sub>50</sub>: Lethal Dose, 50%  
LC<sub>50</sub>: Lethal Concentration, 50%  
EC<sub>50</sub>: Effective Concentration, 50%  
TWA: Time Weighted Average

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

**Disclaimer**

Information presented in this SDS is furnished in accordance with OSHA's Hazard Communication Standard (HCS) 2012.

This information provided was developed and is provided for educational purposes and is not intended to be, nor should it be construed as, legal advice or as ensuring compliance with any laws or regulations of any jurisdiction. ERCO Worldwide, A division of Superior Plus LP ("ERCO") assumes no responsibility and shall have no liability for any inaccuracies, errors or omissions in, nor for any damages (including consequential, or indirect damages), losses, costs, fees, resulting from the use of, or reliance on, any part of this information. Likewise, ERCO assumes no responsibility for injury to, or the death of, recipient(s) or users of this information, or for any loss or damage to any property, arising from the use or consideration of this information. The recipient(s) and users, and each of their respective employees and agents, assume all responsibility and liability for all such risks, costs, losses, damages, fees, or otherwise, even if caused by the negligence, omission, default, or error in judgement of ERCO, its agents, subsidiaries, affiliates, or representatives.

Recipients or users of this information should ensure, and are responsible for, its compliance with the current state of the law and legislation applicable thereto, and the content of the laws and regulations of any other jurisdictions, as applicable. Any person receiving or using this SDS is responsible for and must exercise their own judgment and due diligence in ensuring safe and lawful use and handling of any product or information, as they assume the risk of suing or relying on any information contained herein.