


**Sodium Hypochlorite 12.5 wt%**

Version 6

Revision Date 02/15/2011

Print Date 01/02/2013

**SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : Sodium Hypochlorite 12.5 wt%  
 Product code : 105004  
 MSDS Number : 10000032  
 Synonyms : Sodium Hypochlorite - 18, Hypo, Liquid Bleach, Bleach, Hypochlorite, Liquid Chlorine Solution, Javel Water  
 Chemical Family : Hypochlorite  
 Molecular formula : NaOCl  
 Product Use Description : Swimming pool chlorinator, hard surface cleaner, mildicide, Water treatment chemical, Biocides, bleach solutions and bleach fixer solutions

**Company**

Olin Chlor Alkali Products  
 490 Stuart Road, NE  
 Cleveland, Tennessee 37312

Pioneer Americas, LLC  
 d/b/a Olin Chlor Alkali Products  
 490 Stuart Road, NE  
 Cleveland, Tennessee 37312

Olin Canada ULC  
 d/b/a Olin Chlor Alkali Products  
 2020 University, Suite 2190  
 Montreal, Quebec H3A 2A5

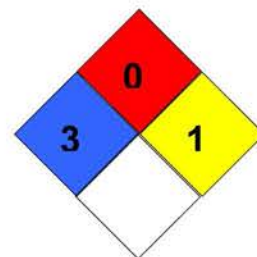
Emergency Phone Number : **US: 1-800-424-9300 - CHEMTREC**  
**CANADA: 1-800-567-7455**

**SECTION 2. HAZARDS IDENTIFICATION**

**HMIS Classification** : Health Hazard: 3  
 Flammability: 0  
 Physical hazards: 2

HMIS	
Health Hazard	3
Flammability	0
Physical hazards	2

**NFPA Classification** : Health Hazard: 3  
 Fire Hazard: 0  
 Reactivity Hazard: 1


**Emergency Overview**

OSHA Hazards : OXIDIZER, UNSTABLE (REACTIVE), CORROSIVE  
 Immediately Dangerous to Life or Health : Not established for the product.

**Potential Health Effects**

Primary Routes of Entry : Ingestion, Eyes, Inhalation, Skin Absorption  
 Aggravated Medical Condition : Asthma, Heart disease, Respiratory disorder  
 Inhalation : Inhalation of vapors is irritating to the respiratory system, may cause throat pain and cough.  
 Inhalation of aerosol may cause irritation to the upper respiratory tract.  
 Higher exposure may cause lung edema, circulatory collapse and unconsciousness.

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- Skin** : May cause skin irritation and/or dermatitis.  
Prolonged skin exposure may cause destruction of the dermis with impairment of the skin to regenerate at site of contact.
- Eyes** : Causes serious eye irritation.  
Blurred vision  
May cause impairment of vision and corneal damage
- Ingestion** : Ingestion or inhalation of high concentrations may cause injuries to gastrointestinal tract, liver, kidneys and central nervous system.  
Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
- Chronic Exposure** : 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.

**NTP:** No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**IARC:** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**OSHA:** No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**ACGIH:** No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS****Hazardous components**

Component	CAS-No.	Weight %
sodium hypochlorite	7681-52-9	10.00 - 20.00
sodium hydroxide	1310-73-2	1.00 - 5.00

**SECTION 4. FIRST AID MEASURES****First aid procedures**

- Eye contact** : • IMMEDIATELY flush eyes with plenty of water holding eyelids apart for at least 15-20 minutes  
• Get medical attention IMMEDIATELY.
- Skin contact** : • Take off contaminated clothing.  
• Rinse skin immediately with plenty of water for 15-20 minutes.  
• Call a poison control center or doctor for treatment advice.
- Ingestion** : • Call a poison control center or doctor immediately for treatment advice.  
• Have person sip a glass of water if able to swallow.  
• Do not induce vomiting unless told to do so by the poison control center or doctor.  
• Do not give anything by mouth to an unconscious person.
- Inhalation** : • Move person to fresh air.

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- If breathing is difficult oxygen may be beneficial if administered by trained personnel.
  - If breathing has stopped, apply artificial respiration.
  - Call a physician or poison control center IMMEDIATELY.
- General advice : • Have the product container or label with you when calling a poison control center or doctor or going for treatment.
- Show this safety data sheet to the doctor in attendance.

**Notes to physician**

- Comments : • Probable mucosal damage may contraindicate the use of gastric lavage.

**SECTION 5. FIRE-FIGHTING MEASURES****Flammable properties**

- Flash point : not applicable
- Lower explosion limit : not applicable
- Upper explosion limit : not applicable

**Fire fighting**

- Suitable extinguishing media : • Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- On small fire, use dry chemical, carbon dioxide or water spray.
  - On large fires, use water in flooding quantities as fog.
- Unsuitable extinguishing media : • Do not use Mono Ammonium Phosphate (MAP) type extinguishers directly on this product
- Further information : • Cool containers / tanks with water spray.

**Protective equipment and precautions for firefighters**

- Specific hazards during fire fighting : • Corrosive
- Special protective equipment for fire-fighters : • Additional protective clothing must be worn to prevent personal contact with this material. Those items include but are not limited to: boots gloves, hard hat, splash-proof goggles, full face shield and impervious clothing, i.e. chemically impermeable suit.
- Compatible materials for response to this material are neoprene and butyl rubber.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

- Personal precautions : Restrict access to affected area.  
Use personal protective equipment.  
Use NIOSH approved respiratory protection.  
Keep people away from and upwind of spill/leak.
- Methods for containment /  
Methods for cleaning up : Try to prevent the material from entering drains or water courses.  
Prevent further leakage or spillage if safe to do so.

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Inform the responsible authorities in case of gas leakage, or of entry into waterways, soil or drains.  
 Will form hazardous reaction products  
 Suppress (knock down) gases/vapours/mists with a water spray jet.  
 Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a suitable container for disposal according to local / state / province/national regulations (see section 13).

Additional advice : • Dispose of as hazardous waste in compliance with local, province, state and federal regulations.  
 • You are requested to contact the emergency numbers listed below before beginning any such operation.

FOR ALL ACCIDENTS, CALL CHEMTREC AT 800-424-9300 OR CANADA AT 1-800-567-7455.

**SECTION 7. HANDLING AND STORAGE****Handling**

Handling : Personnel working with this chemical should be trained on its hazards.  
 Avoid contact with skin and eyes.  
 Do not ingest.  
 Avoid inhalation of vapor or mist.  
 Wear personal protective equipment.  
 For personal protection see section 8.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

**Storage**

Requirements for storage areas and containers : Do not freeze.  
 Store in a cool and shaded area.  
 Keep in a well-ventilated place.  
 To maintain product quality, do not store in heat or direct sunlight.  
 Decomposition rate increases as it is heated.  
 Keep in properly labeled containers.  
 Keep container closed when not in use.

Store at temperatures not exceeding : 86 F (30 C)

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Exposure Guidelines****Components with workplace control parameters**

Components	CAS-No.	Value	Control parameters	Update	Basis
sodium hydroxide	1310-73-2	CEIL	2 mg/m3	1994-09-01	ACGIH
		TWA	2 mg/m3	1993-06-30	OSHA P1

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**Engineering measures**

Engineering measures : Use local exhaust ventilation to maintain levels to below the PEL.

**Personal protective equipment**

Eye protection : Ensure that eyewash stations and safety showers are close to the workstation location. Chemical resistant goggles must be worn.

Skin and body protection : Boots. Full protective suit. Wear protective gloves.

Respiratory protection : Sudden release of chlorine hazard. If air concentrations above the PEL are possible, wear a NIOSH approved respirator. Wear respiratory equipment when entering the spray area.

Hygiene measures : • General industrial hygiene practice.

**Suitable material****Boots.**

- Neoprene
- butyl-rubber
- PVC
- Viton<sup>®</sup>
- Saranex<sup>®</sup>

**Gloves**

- Neoprene
- butyl-rubber
- PVC
- Viton<sup>®</sup>
- Saranex<sup>®</sup>

**Protective suit**

- Neoprene
- butyl-rubber
- PVC
- Viton<sup>®</sup>
- Saranex<sup>®</sup>

The listed materials are guidelines only and there are numerous PPE alternatives depending on the site specifics of where the chemical is used. You should always consult with your PPE supplier for the correct tested material.

**Before using this chemical you should be aware of its hazards and be knowledgeable of emergency procedures in the event of a spill.**

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES****Appearance**

Form : liquid

Color : yellow to yellowish green

Odor : pungent

**Safety data**

Flash point : not applicable

Lower explosion limit : not applicable

Upper explosion limit : not applicable

Autoignition temperature : not applicable

Molecular Weight : 74.5 g/mol

pH : 12 - 14 at 77 F (25 C)

Freezing point : -17 F (-27 C) 16% Solution

Boiling point/boiling range : Decomposes on heating.

Vapor pressure : 12 mmHg at 68 F (20 C) 12.5% Solution

Bulk density : not applicable

Water solubility : completely miscible

Evaporation rate : no data available

**SECTION 10. STABILITY AND REACTIVITY**

Conditions to avoid : • High heat, sunlight and ultra-violet light

Materials to avoid : • Oxidizing agents, Acids, Nitrogen containing organics, Metals, Iron, Copper, Nickel, Cobalt, Organic materials, Ammonia

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Hazardous decomposition products	: Decomposition will result in the formation of oxygen from contact with copper, nickel, cobalt and iron solids such as rust. Decomposition rate increases as it is heated. May develop chlorine if mixed with acidic solutions.
Thermal decomposition	: Decomposition rate increases as it is heated.
Hazardous polymerization	: Does not occur.

**SECTION 11. TOXICOLOGICAL INFORMATION****Human Threshold Response**

Odor threshold	: approximately 0.9 mg/m <sup>3</sup> (0.3 ppm) pungent
Irritation Threshold	: no data available
Immediately Dangerous to Life or Health	: Not established for the product.

**Animal Toxicology**

Acute oral toxicity	: LD50 rat Dose: 3 - 5 g/kg
Acute dermal toxicity	: LD50 rabbit Dose: > 2 g/kg
Acute inhalation toxicity	: LC50 no data available

**SECTION 12. ECOLOGICAL INFORMATION**

Acute Fish toxicity	: LC50 Bluegill sunfish: 2.90 mg/L Exposure time: 96 Hour
	LC50 Pimephales promelas (fathead minnow): 1.40 mg/L Exposure time: 96 Hour
	LC50 Oncorhynchus mykiss (rainbow trout): 0.90 mg/L Exposure time: 0.5 Hour

**SECTION 13. DISPOSAL CONSIDERATIONS**

Waste Classification	: If this product becomes a waste, it meets the criteria of a hazardous waste as defined under 40 CFR 261 and would have the following: D002
Further information	: <ul style="list-style-type: none"> <li>• If this product becomes a hazardous waste, it will be a hazardous waste which is subject to the Land Disposal Restrictions under 40 CFR 268 and must be managed accordingly.</li> <li>• Dispose of as hazardous waste in compliance with local, province, state and federal regulations.</li> </ul>

CARE MUST BE TAKEN TO PREVENT ENVIRONMENTAL CONTAMINATION FROM THE USE OF THIS MATERIAL. THE USER OF THIS MATERIAL HAS THE RESPONSIBILITY TO DISPOSE OF UNUSED MATERIAL.

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RESIDUES AND CONTAINERS IN COMPLIANCE WITH ALL RELEVANT LOCAL, PROVINCE, STATE AND FEDERAL LAWS AND REGULATIONS REGARDING TREATMENT, STORAGE AND DISPOSAL FOR HAZARDOUS AND NON HAZARDOUS WASTES.

**SECTION 14. TRANSPORT INFORMATION**

**DOT** Proper shipping name : Hypochlorite Solutions  
 UN-Number : UN1791  
 Class : 8  
 Packing group : III  
 Hazard Labels/Placard : 8  
 Emergency Response : 154  
 Guidebook Number :  
 Reportable Quantity : 100 LB  
 (Per 49 CFR 172.101, Appendix)

**TDG CLR** Proper shipping name : Hypochlorite Solutions  
 UN-Number : UN1791  
 Class : 8  
 Packing group : III  
 Hazard Labels/Placard : 8

**IATA** UN-Number : UN1791  
 Description of the goods : Hypochlorite Solutions  
 Class : 8  
 Packaging group : III  
 ICAO-Labels : 8

**IMDG** UN-Number : UN1791  
 Description of the goods : Hypochlorite Solutions  
 Class : 8  
 Packaging group : III  
 IMDG-Labels : 8  
 Marine pollutant : no

See regulations for further information.

FOR ALL ACCIDENTS, CALL CHEMTREC AT 800-424-9300 OR CANADA AT 1-800-567-7455.

**SECTION 15. REGULATORY INFORMATION****CANADIAN CLASSIFICATION**

**WHMIS Classification** : E Corrosive Material

**NPRI Components** : Hypochlorous acid, sodium salt 7681-52-9  
 Sodium hydroxide (Na(OH)) 1310-73-2

Canadian National Pollutant Release Inventory (NPRI): No component is listed on NPRI.

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

**US CLASSIFICATION**

**OSHA Hazards** : Oxidizer, Unstable (reactive), Corrosive

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**CERCLA** : 100 lbs

**SARA 311/312 Hazards** : Acute Health Hazard  
 Chronic Health Hazard  
 Reactivity Hazard

**EPCRA - Emergency Planning and Community Right-to-Know Act**

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**US STATE REGULATIONS**

**Massachusetts Right To Know Components** : Hypochlorous acid, sodium salt 7681-52-9  
 1991-07-01

Sodium hydroxide (Na(OH)) 1310-73-2  
 1991-07-01

**Pennsylvania Right To Know Components** : Hypochlorous acid, sodium salt 7681-52-9  
 1991-07-01

Sodium hydroxide (Na(OH)) 1310-73-2  
 1991-07-01

Sodium chloride (NaCl) 7647-14-5

Water 7732-18-5

Carbonic acid disodium salt 497-19-8

**New Jersey Right To Know Components** : Water 7732-18-5

Hypochlorous acid, sodium salt 7681-52-9  
 1991-07-01

Sodium chloride (NaCl) 7647-14-5

Sodium hydroxide (Na(OH)) 1310-73-2  
 1991-07-01

**California Prop 65 Components** : 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 State Drinking Water and Toxic Enforcement Act. For additional information, contact Olin Technical Services (800-299-6546).

**GLOBAL INVENTORIES**

**The components of this product are reported in the following inventories:**

**EINECS** On the inventory, or in compliance with the inventory



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<b>TSCA</b>	On TSCA Inventory
<b>AICS</b>	On the inventory, or in compliance with the inventory
<b>DSL</b>	All components of this product are on the Canadian DSL list.
<b>ENCS</b>	On the inventory, or in compliance with the inventory
<b>KECI</b>	On the inventory, or in compliance with the inventory
<b>PICCS</b>	On the inventory, or in compliance with the inventory
<b>IECSC</b>	On the inventory, or in compliance with the inventory
<b>NZIoC</b>	On the inventory, or in compliance with the inventory

**SECTION 16. OTHER INFORMATION****Further information**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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