HyPure® Sodium Hypochlorite, 20-30%

Version 2 Revision Date 02/20/2014 Print Date 02/20/2014

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	HyPure® Sodium Hypochlorite, 20-30%
Product code		
MSDS Number	:	10000077
Synonyms	:	Hypo, Liquid Bleach, Bleach, Hypochlorite, Javel Water
Chemical Family	:	Hypochlorite
Molecular formula	:	NaOCl
Product Use Description	:	For manufacturing or formulating products used in Swimming pool chlorinators, hard surface cleaners, mildecides, Water treatment chemicals, 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

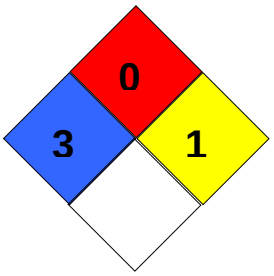
Emergency Phone Number : **US: 1-800-424-9300 - CHEMTREC**
CANADA: 1-800-567-7455

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.

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 of high concentrations may cause injuries to gastrointestinal tract, liver and kidneys. 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	>= 20.00 - <= 30.00
sodium hydroxide	1310-73-2	>= 0.10 - <= 2.00

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.

- 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 extinquishers 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.
- Wear a positive-pressure supplied-air respirator with full facepiece.
- 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 / : Try to prevent the material from entering drains or water courses.

Methods for cleaning up		Prevent further leakage or spillage if safe to do so. 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 1-800-424-9300 OR NEWALTA (IN 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	:	50 °F (10 °C)
Other data	:	Shelf life depends on concentration. 22% product is limited to twenty one (21) days at an average temperature of 50° F

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

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 ®
- Saranex®

Gloves
- Neoprene
- butyl-rubber
- PVC
- Viton ®
- Saranex®

Protective suit
- Neoprene
- butyl-rubber
- PVC
- Viton ®
- Saranex®

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 : 28 °F (-2 °C) 20% Solution
Boiling point/boiling range : Decomposes on heating.
Vapor pressure : no data available
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
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/m3 (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	:	• 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.

- Dispose of as hazardous waste in compliance with local, province, state and federal regulations.

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, RESIDUES AND CONTAINERS IN COMPLIANCE WITH ALL RELEVANT LOCAL, PROVINCIAL, 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	: II
	Hazard Labels/Placard	: 8
	Emergency Response Guidebook Number	: 154
	Reportable Quantity	: 100 LB (Per 49 CFR 172.101, Appendix)
TDG CLR	Proper shipping name	: Hypochlorite Solutions
	UN-Number	: UN1791
	Class	: 8
	Packing group	: II
	Hazard Labels/Placard	: 8
IATA	UN-Number	: UN1791
	Description of the goods	: Hypochlorite Solutions
	Class	: 8
	Packaging group	: II
	ICAO-Labels	: 8
IMDG	UN-Number	: UN1791
	Description of the goods	: Hypochlorite Solutions
	Class	: 8
	Packaging group	: II
	IMDG-Labels	: 8
	Marine pollutant	: no

See regulations for further information.

FOR ALL ACCIDENTS, CALL CHEMTREC AT 1-800-424-9300 OR NEWALTA (IN 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
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 1991-07-01	7681-52-9
		Sodium hydroxide (Na(OH)) 1991-07-01	1310-73-2
Pennsylvania Right To Know Components	:	Hypochlorous acid, sodium salt 1991-07-01	7681-52-9
		Sodium chloride (NaCl)	7647-14-5
		Water	7732-18-5
		Sodium hydroxide (Na(OH)) 1991-07-01	1310-73-2
		Carbonic acid disodium salt	497-19-8
New Jersey Right To Know Components	:	Water	7732-18-5
		Hypochlorous acid, sodium salt 1991-07-01	7681-52-9
		Sodium chloride (NaCl)	7647-14-5
		Sodium hydroxide (Na(OH)) 1991-07-01	1310-73-2

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