

According to 29 CFR 1910.1200



Date of issue:	July 01, 2009	Revis	ion date:	September 01, 2	023	Version No.	7
SECTION 1 IDENTIFICA	TION OF THE S	SUBSTANCE/MIXT	URE AND OF	THE COMPANY/UN	NDERTAKIN	G	
1.1 Product identifier							
Product form	S	ubstance					
Substance name	S	odium Hypochlorit	e				
CAS No.	7	681-52-9					
Formula	Ν	laOCI					
Synonyms	В	leach, javex water,	chlorox				
1.2 Relevant identified us	ses of the subs	stance or mixture	and uses adv	ised against			
Use of the substance	/mixture A	ccording to the tec	hnical sheet of	the product.			
1.3 Details of the supplie	r of the safety	data sheet					
Pima Chemicals & Fer 1370 Nogales, Az. Tel. 011 52 (662) 182-0 rgutierrez@qpima.com www.qpima.com 1.4 Emergency telephone	tilizers, LLC 0559 e number		Química Pima Del Cobre 20, Hermosillo, Sc Tel. 011 (662)	S.A. de C.V. Parque Industrial H nora, México. C.P. 251-0010 ventas@	lermosillo. 83297 oqpima.com		
Emergency number	C	HEMTREC (24HR	Emergency Te	lephone), call: 1-80	0-424-9300		
SECTION 2 HAZARD IDI	ENTIFICATION		5,	1 //			
2.1. GHS-US classificatio	n						
Metal Corrosion Cat.1							
Acute toxicity, oral Cat	. 4						
Skin corrosion/irritatior	n Cat. 1B						
Eye damage/irritation	Cat. 1						
Acute toxicity, inhalation	on Cat. 4						
Aquatic environment h	azards - short-t	erm (acute) hazarc	l Cat. 1				
2.2. Label elements							
GHS-US labeling							
Hazard pictogram (G	HS-US)		4		¥	>	
Signal word (GHS-US	S):	Danger					
Hazard statement(GI	HS-US):	H290 May be c	corrosive to met	als	V		
		H302 Harmful i	t swallowed				



According to 29 CFR 1910.1200

# SODIUM HYPOCHLORITE

	H314 Causes severe skin burns and eye damage.
	H318 Causes serious eye damage.
	H332 Harmful if inhaled.
	H400 Very toxic for aquatic organisms.P234
Precautionary statements (GHS-US):	Keep only in original container. P260 Do not breathe dust, fume, gas, mist, vapours or spray. P264 Wash exposed skin thoroughly after handling. P270 Do not eat, drink or smoke while handling this product.P271 Use only outdoors or in a well-ventilated place. P273 Do not disperse in the environment. P280 Wear protective gloves/protective clothing/eye protection/face protection.
	<ul> <li>P301+P312 IF SWALLOWED: Call a doctor if the person is unwell.</li> <li>P301+P330 Rinse mouth.</li> <li>P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.</li> <li>P303+P361+P353 If on skin (of hair): Take off immediately all contaminated clothing.</li> <li>Rinse skin with water/shower.</li> <li>P636 Wash contaminated clothing before reuse.</li> <li>P304+P340 IF INHALED: Remove person to fresh air and keep comfortable forbreathing</li> <li>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</li> <li>P310 Immediately call a poison center or doctor.</li> <li>P390 Absorb spillage to prevent material-damage.</li> <li>P391 Collect spills.</li> </ul>
	P405 Store locked up. P406 Store in a corrosion resistant container with a resistant inner liner.
	P501 Dispose of contents/container in accordance with local/regional/national/ international regulations.
2.3. Other hazards	Not available.
2.4 Environmental hazards	This material has shown high toxicity to aquatic organisms.

## SECTION 3.- COMPOSICION / INFORMATION OF INGREDIENTS

3.1 Mixture	
-------------	--

Not applicable 3.2 Substance

Name	Product identifier	%	GHS-US classification
Sodium Hypochlorite	(CAS NO.) 7681-52-9	10-17	Metal Corr. 1, H290 Acute Tox. Oral 4, H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 Acute Tox. inhalation 4, H332 Aquatic environment hazards 1, H400

### **SECTION 4.- FIRST AID MEASURE**

4.1. Description of first air measure



According to 29 CFR 1910.1200

# SODIUM HYPOCHLORITE

First-aid measures general	IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after eye contact	Immediately rinse with water for a prolonged period (at least 20 minutes) while holding the eyelids wide open. Seek medical attention immediately if exposure is severe. Obtain medical attention if irritation develops or persists.
First-aid measures after skin contact	Immediately remove contaminated clothing and shoes. Immediately wash the affected area with plenty of water for at least 15 minutes, repeating the washing operation if the irritation persists. Get medical attention immediately, as untreated cauterizations can become wounds that are difficult to heal. If the patient has to be transferred to a hospital center, continue washing during the journey. Never apply creams or ointments. Wash contaminated clothing before reuse.
First-aid measures after inhalation	If inhalation of vapors or aerosols occurs and adverse effects occur as a result, move to an uncontaminated area. Determine if there is airway constriction if there is breathing and if blood is circulating and treat symptoms. GET IMMEDIATE MEDICAL ATTENTION.
First-aid measures after ingestion	DO NOT INDUCE VOMITING. If the victim is alert and not convulsing, rinse the mouth and provide as much water as possible to dilute the material. If spontaneous vomiting occurs, have the victim lean forward with his head down to prevent him from sucking up the vomit, rinse his mouth, and give him more water. Transport the victim IMMEDIATELY to a relief center.

### 4.2. Most important symptoms and effects, both acute and delayed

------

.

Potential acute health effects.

ratory system: Exposure to the aerogenic mate rer airways, cough, laryngeal spasm and eden n and possible pulmonary edema.	ijuries after inhalation redness of the lower airways, of broncho constriction and possible	n and edema, difficulty breathing,
<li>cin. Exposure of the skin can cause redness, itc , or third degree), liquefaction of the skin, and da ful wounds).</li>	njuries after skin Corrosion on the skin. Exposure burns (first, second, or third degr tissues (deep, painful wounds).	edness, itching, irritation, swelling, skin, and damage to the underlying
the eyes. Eye exposures can cause eyelid burn rn, corneal perforation, damage to the eye con ess and / or loss of the eye.	njuries after eye Serious damage to the eyes. Eye edema, corneal burn, corneal per defects, and blindness and / or lo	eyelid burns, conjunctivitis, corneal he eye contents, permanent visual
pintestinal tract: Ingestion exposure can cause irri gastrointestinal tissues. Permanent scarring may c	ijuries after ingestion Effects on the gastrointestinal trac perforation of upper gastrointestina	an cause irritation, inflammation and arring may occur.
	ymptoms of overexposure.	
e nose and throat. When mixed with acids, hyp nts of chlorine gas. This gas can cause severe no d levels of chlorine gas can result in severe lung c	njuries after inhalation Exposure to elevated levels of chlorine	acids, hypochlorite solutions can se severe nose and throat irritation. evere lung damage.
pirritation and / or burns, the effects depend on t	ijuries after skin It can cause severe irritation and solution and the exposure time	depend on the concentration of the
and possible permanent damage with possible lo	ijuries after eye It can cause burns and possible p slow to be provided.	n possible loss of vision if first aid is
on, pain and inflammation to the mouth and sto , coma and in severe cases, death. It can cau nach	ijuries after ingestion It can cause irritation, pain and i confusion, delirium, coma and i esophagus or stomach	uth and stomach, vomiting, shock, It can cause a perforation in the
or repeated skin contact with solutions conta use allergic contact dermatitis. Symptoms includ an react to very dilute solutions (0.04-0.06% NaOC	skin:         Prolonged or repeated structure           uptoms         hypochlorite can cause allergic c           Sensitized people can react to ver	tions containing 4 to 6% sodium toms include chronic itchy eczema. 0.06% NaOCI) that touch their skin.
ess and / or loss of the eye. pintestinal tract: Ingestion exposure can cause irrigastrointestinal tissues. Permanent scarring may of e nose and throat. When mixed with acids, hyp nts of chlorine gas. This gas can cause severe no d levels of chlorine gas can result in severe lung d irritation and / or burns, the effects depend on the consistence of the permanent damage with possible loc d. on, pain and inflammation to the mouth and sto , coma and in severe cases, death. It can cause nach or repeated skin contact with solutions conta- use allergic contact dermatitis. Symptoms incluce an react to very dilute solutions (0.04-0.06% NaOC	njuries after ingestiondefects, and blindness and / or locnjuries after inhalationEffects on the gastrointestinal trace perforation of upper gastrointestinal perforation of upper gastrointestinal trelease large amounts of chlorine Exposure to elevated levels of chlor lt can cause severe irritation and solution and the exposure time lt can cause burns and possible p slow to be provided. It can cause irritation, pain and i esophagus or stomach SKIN: Prolonged or repeated hypochlorite can cause allergic c Sensitized people can react to ver	In cause irritation, inflammation a arring may occur. In acids, hypochlorite solutions of se severe nose and throat irritation evere lung damage. Idepend on the concentration of in possible loss of vision if first ai uth and stomach, vomiting, sho if t can cause a perforation in tions containing 4 to 6% soo toms include chronic itchy ecze 0.06% NaOCI) that touch their ski

. .. ..



According to 29 CFR 1910.1200

# SODIUM HYPOCHLORITE

### 4.3. Indications of any immediate medical attention and special treatment needed

Symptomatic. Supportive treatment and therapy as indicated. DO NOT PROVIDE acidic antidotes such as juices, soft drinks, vinegar, etc. This product contains materials that can cause severe pneumonia if aspirated. If ingestion occurred less than 2 hours ago, perform careful gastric lavage; use an endotracheal tube if available to avoid aspiration.

Ensure that the patient does not have respiratory distress due to aspiration pneumonitis. Provide artificial resuscitation and adequate chemotherapy if breathing is depressed. After exposure, the patient should remain under medical supervision for a minimum of 48 hours since late pneumonitis may occur. Lung edema is likely to be caused and its effects may be delayed. If provided in time, steroid therapy can be effective in preventing or relieving edema

#### Protection of first aid personnel

Protect yourself by avoiding contact with this material. Wear personal protective equipment. See section 8 for specific personal protective equipment recommendations. Avoid contact with skin and eyes. Do not ingest. Do not breathe mist, vapors, or sprays. At a minimum, when treating personnel, sufficient personal protective equipment must be worn to prevent the transmission of pathogens by blood.

#### SECTION 5.- FIREFIGHTING MEASURES

#### 5.1. Extinguishing media

Suitable extinguishing media	For large fires, use an all-purpose AFFF-type alcohol-resistant medium expansion foam in accordance with techniques recommended by the foam manufacturer. You should consult the foam supplier for recommendations on foam types and dispersion rate in specific applications. Carbon dioxide or dry chemical media for small fires. If there is only water available, use it as a mist. Evacuate personnel to a safe area and prevent unauthorized personnel from entering the fire area. Keep personnel away and in a position contrary to the direction of gases and fumes.
Unsuitable extinguishing media	Do not get water inside containers. Do not apply water stream directly at source of leak. Do not use a heavy water stream. A direct water stream will cause violent splattering and generation of heat.

#### 5.2. Special hazard arising from the substance or mixture

Sodium hypochlorite is a strong chemical oxidant, but the solutions do not support combustion. Reaction with nitrogen compounds, organic chlorine compounds or easily oxidizable compounds (reducing agents) can be explosive. This material is not flammable but decomposes in heat and light, causing a build-up of pressure that can cause an explosion. A strong reaction with oxidizing or organic materials can result in a fire.

#### 5.3. Dangerous products due to thermal decomposition.

Non-combustible substance, in itself does not produce combustion, but can decompose in contact with heat can release chlorine gas.

#### 5.4. Special measures to be followed by firefighting groups.

#### 5.5. Advice for firefighters

Wear self-contained breathing apparatus. Structural firefighter protective clothing provides limited protection in fire situations ONLY; It may not be effective in spill situations. In major spills, wear chemical protective clothing, which is specifically recommended by the manufacturer. It may provide little or no thermal protection.

Other information	If a tank truck or pipe is involved in a fire, ISOLATE it and consider evacuation within a radius of 0.8
	km.

### SECTION 6.- ACCIDENTAL RELEASE MEASURES

### 6.1. Personal precautions, protective equipment and emergency procedure.

Restrict access to the area until cleaning is complete. Make sure that cleaning is carried out by trained personnel. Eliminate all sources of ignition (smoking, burners, sparks, or flames). All equipment must be grounded and not spark. Ventilate the

According to 29 CFR 1910.1200



#### area.

Put on appropriate personal protective equipment. Do not touch the spilled material.

If possible, stop the leak without risk to personnel.

Small Spills: Cover with DRY soil, sand, or other non-combustible material. Use clean, non-sparking tools to collect the material and place it in plastic containers with not very tight covers for later disposal. Rinse the area with water.

Large Spills: Prevent entry to drains and confined areas. Make a dam with inert material (sand, earth, etc.). Contact fire and emergency services and the provider for advice. Collect the product to recover it or dispose of it by pumping it into polyethylene containers. Consider neutralization and on-site disposal.

Make sure all tools and equipment are properly decontaminated after cleaning. Collect contaminated soil and water as well as absorbent for proper disposal. Comply with federal, state or provincial, and local regulations on reporting discharges.

#### 6.2. Environmental precautions.

Keep out of the water supply and sinks. This substance is alkaline and can raise the pH of surface waters with low buffering capacity. If necessary, leaks should be reported to the appropriate agencies.

#### 6.3. Methods and materials for the containment and cleaning up of spills and leaks.

Hypochlorite can be broken down by covering it with a reducing agent such as sodium sulphite or sodium thiosulfate. Use sodium sulfite or dilute hydrogen peroxide to reduce the material. Make sure there are no chlorine residues before neutralizing with a weak solution of hydrochloric or sulfuric acid.

	Dispose of waste material in an approved waste treatment and disposal facility, in
Waste disposal	accordance with applicable regulations. Do not dispose of waste in normal trash or drainage systems.

#### 6.4. For emergency responders

Protective equipment	Use recommended respiratory protection. Wear suitable protective clothing, gloves and eye/face protection.
Emergency procedures	Stop leak if safe to do so. Eliminate ignition sources. Evacuate unnecessary personnel. Ventilate area.

#### 6.5. Environmental precautions

If spill could potentially enter any waterway, including intermittent dry creeks, contact the U.S. COAST GUARD NATIONAL RESPONSE CENTER at 800-424-8802. In case of accident or road spill notify CHEMTREC at 800-424-9300 (in USA) or CANUTEC at 613-996-6666 (in Canada). In other countries call CHEMTREC at (International code) +1-703-527-3887.

Other information Dispose of materials or solid residues at an authorized site.

#### 6.6 Reference to other sections

For further information refer to section 8: Exposure-controls/personal protection.

#### SECTION 7.- HANDLING AND STORAGE

#### 7.1. Precautions for safe handling

Have emergency equipment immediately available (for fires, spills, leaks, etc.). Make sure all containers are labeled. Put on appropriate personal protective equipment. People who work with this chemical must be adequately trained regarding its risks and its safe use.

Avoid generating dew. Use as few amounts as possible in designated areas with adequate ventilation. Keep containers closed while not in use. Empty containers can contain hazardous waste. Use corrosion resistant transfer equipment when dispensing.

#### 7.2. Conditions for safe storage, including any incompatibilities

Store it in a cool, dry, well-ventilated area away from direct sunlight. Store the containers at a temperature of 15 to 29  $^{\circ}$  C (59 to 84  $^{\circ}$  F). Do not store above 30  $^{\circ}$  C (86  $^{\circ}$  F) or below freezing point. Keep containers tightly closed when not in use and when empty. Protect them from damage. Discharge caps should be checked using full personal protection. Store away from incompatible materials such as



According to 29 CFR 1910.1200

reducing materials, strong acids, compounds of nitrogen, copper, nickel, and cobalt. Use corrosion resistant structural materials and lighting and ventilation systems in the storage area. This product has a shelf life of up to six months at 60 ° F or less.

Exterior storage tanks should be surrounded by levees or some suitable means of secondary containment. Appropriate containment measures should be taken to prevent spills or leaks from storage tanks inside, as well as from pipe discharge stations to prevent the substance from entering the drain or other channels that directly discharge into the wastewater system. water or a municipal drainage system.

7.3 Specific end use(s) Not available.

## SECTION 8.- EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1	Control	parameters
0.1.	CONTROL	Darameters

Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sodium Hypochlorite 7681-52-9	N.D.*	N.D.*	N.D.*
*Chlorine. Can make chlorine as the decomposition product	0.5 ppm	0.5 ppm	10 ppm

8.2. Exposure controls

Appropriate engineering controls	Local exhaust ventilation should be applied where there is an incidence of emissions at the point of origin or dispersion of regulated pollutants in the work area. Ventilation control for the contaminant as close as possible to its point of generation is the most economical and safest method of minimizing personnel exposure to airborne contaminants. The most effective measures are to place all the processes in a totally protected area and mechanize the handling procedures to avoid all personal contact. Smoking should be prohibited in areas where sodium hypochlorite solution is stored or handled.						
3.3. Individual protection measures, such as personal protective equipment (PPE).							
Face / eye protection	Wear chemical splash resistant lenses and full-face protection. Keep eyewash fountains and quick-wash showers in the work area.						
Skin protection	Wear waterproof protective clothing, including boots, gloves, lab coat, apron, raincoat, pants, or rompers to avoid skin contact. RECOMMENDED (more than eight hours of resistance to penetration): butyl rubber, natural rubber, neoprene, nitrile rubber, polyethylene, Viton (MR), Saranex (MR), Responder (MR). The recommendations are valid for permeation rates that reach 0.1 ug / cm2 / min or 1 mg / m2 / min or more. The resistance to specific materials may vary from one product to another. Penetration times are obtained under continuous contact conditions, generally at room temperature. Assess resistance under your conditions of use and carefully maintain clothing. Wear protective clothing to minimize skin contact. When the possibility of contact with wet material exists, use Tychem or a similar chemical protection suit. When the possibility of contact with dry material exists, use disposable coveralls suitable for exposure to dust, such as Tyvek. Always put pants over boots. Wash and dry contaminated clothing completely before reuse. Discard contaminated leather materials. Before handling this product, you must choose the appropriate footwear and any other additional skin protection measures based on the task performed and the associated risks, for which you will have the approval of a specialist. Recommended: chemical resistant, neoprene, PVC. Contact your protective equipment supplier to verify the compatibility of the equipment for the intended purpose.						



According to 29 CFR 1910.1200

# SODIUM HYPOCHLORITE

**Respiratory protection** 

Hygiene measures

A NIOSH / MSHA approved air-purifying respirator equipped with acid mist cartridges at concentrations up to 10 times TLV. Use an air respirator if the concentrations are higher or unknown.

Wash hands, forearms, and face thoroughly after handling chemicals, before eating, smoking, and using the sink, and at the end of the work period. Use the appropriate techniques to remove contaminated clothing. Wash contaminated clothing before reuse. Verify that eyewash stations and safety showers are near workstations.

#### **SECTION 9.- PHYSICAL AND CHEMICAL PROPERTIES**

9.1	.1 Information on basic physical and chemical properties							
	Physical state:	Liquid.	Appearance:	Liquid, oily.				
	Odor:	Penetrating similar to chlorine.	Color:	From green to yellow				
	Molecular mass		74.44 g/mol					
	Odor threshold		No data available.					
	рН		11-13					
	Relative evaporation	rate (butyl acetate=1)	No data available.					
	Melting/Freezing poin	t	-13.9 a -26°C (7.0 a -16.5	-13.9 a -26°C (7.0 a -16.5°F)				
	Boiling point		111°C (231.8 °F)					
	Flash point		No data available. No data available.					
	Self-ignition temperat	ture						
	Decomposition temperature		> 40°C (104 °F)					
	Flammability (solid, gas)		Not flammable					
	Vapor pressure		3.7 at 100 mmHg					
	Relative vapor densit	у	No data available.					
	Relative density		1.17 - 1.25 gm/ml					
	Solubility		100% in water					
	Log Pow		Not applicable (inorganic s	substance).				
	Log Kow		No data available.					
	Viscosity, kinematic		No data available.					
	Viscosity, dynamic		No data available.					
	Explosive properties		Not expected to present an	n explosion hazard				
	Oxidizing properties		No data available.					
	Explosive limits		No data available.					
9.2	Other information							

No additional information available.

### SECTION 10.- STABILITY AND REACTIVITY

**10.1 Chemical stability** 

Stable at standard temperature and pressure.

10.2 Possibility of

dangerous The stability of the solution can vary under conditions such as: Concentration, catalytic



According to 29 CFR 1910.1200

# SODIUM HYPOCHLORITE

metal impurities, pH, temperature, light sources, ion content, organic impurities.

Keep it away from high temperatures and sunlight or ultraviolet light. Do not store above 30  $^{\circ}$  C (86  $^{\circ}$  F). Do not allow solutions to evaporate until dry. Stay away from incompatibles.

10.4	Incom	patibil	ities

10.3 Conditions to avoid

### Incompatible substances

## Mix Effects

Acids, acidic compounds and acidic-ba	sed cleaning products	WIX ENects	
Aluminum sulfate; Aluminum chloride; Ferrous or ferric chloride; Ferrous or ferric sulfate; Chlorinated Ferrous Sulfate Solution; Brick and concrete cleaners.	Hydrochloric acid; Sulfuric acid; Hydrofluoric acid; Fluor silicic acid; Phosphoric acid.	Release or violent discharge of Chlorine gas.	
Chemical and cleaning products con	ntaining ammonia such as:		
Ammonium hydroxide; Ammonium chloride; Silica ammonium fluoride.	Ammonium sulphate; Quaternary ammonium salts.	Formation of explosive mixtures. Release or discharge of chlorine or other harmful gases.	
Organic chemicals and chemical mix	xtures such as:	5	
Solvents, cleaning products that use solvents in their bases; Combustible fuels and oils; Amines	Propane; Organic polymer; Ethanol; Insecticides; Methanol.	Formation of explosive mixtures. Violent release or discharge of chlorine gas. Formation of organic mixtures with chlorine	
Metals:			
Copper; Nickel; Cobalt; Iron		Generally, there is no violent evolution of oxygen, but it can exceed the pressure limit of the closed system and cause a rupture in it.	
Hydrogen peroxide:		Violent oxygen evolution can occur.	
Reducing agents such as:			
Sodium sulfite; Sodium bisulfite.	Sodium sulfite; Sodium bisulfite.	Develops intense heat, can boil and splash.	
Other incompatible materials:	It can react violently with strong acids, producing toxic chlorine gas. Other incompatibles include organic materials, cellulose, oxidizable materials, ammonia, urea, ammonium salts, ethyleneamine, cyanides, nitrogen compounds, alcohols, metals, and metal oxides. Reacts with metals to produce flammable hydrogen gas. Metal and metal oxide catalysts break down hypochlorites, which develop oxygen and frequently cause explosions. It can react explosively with nitrogen-containing compounds, or form chloroamines, which are explosive. Alkaline hypochlorite solutions can react explosively with some chlororganic compounds. Dangerous decomposition products.		

SECTION 11.-TOXICOLOGICAL INFORMATION



According to 29 CFR 1910.1200

# SODIUM HYPOCHLORITE

Inhalation	t. When mixed with acids, hypochlorite f chlorine gas. This gas can cause severe levated levels of chlorine gas can result in					
Eye contact	It can cause severe burns and corneal damage, which can result in permanent blindness.					
Skin contact	Dew and sodium hypochlorite solutions can cause skin irritation. In severe cases they can result in chemical burns					
Ingestion	It can cause irritation, pain and inflammation to the mouth and stomach, vomiting, shock, confusion, delirium, coma and in severe cases, death. It can cause a perforation in the esophagus or stomach.					
Name	$LD_{50}$ oral	LD <sub>50</sub> intraperitoneal	$LC_{50}$ inhalation			
Sodium Hypochlorite	5,800 mg/kg (rat)	65.12 μg/kg (rat)	-			

11.2 Symptoms related to the physical, chemical and toxicological characteristics.

	•				
Inhalation	Effects on the respiratory system: Exposure to the aerogenic material can cause irritation, redness of the lower airways, cough, laryngeal spasm and edema, shortness of breath, broncho constriction and possible pulmonary edema. Serious permanent scarring may occur.				
Eye contact	Serious damage to the eyes. Eye exposures can cause burns to the eyelids, conjunctivitis, corneal edema, corneal burn, and corneal perforation, damage to the eye contents, permanent visual defects, and blindness and / or loss of the eye.				
Skin contact	Corrosion on the skin. Exposure of the skin can cause redness, itching, irritation, swelling, burns (first, second, or third degree), liquefaction of the skin, and damage to the underlying tissues (deep, painful wounds).				
Ingestion	Effects on the gastrointestinal tract: Ingestion exposure can cause irritation, inflammation and perforation of upper gastrointestinal tissues, including death.				
11.3 Immediate and delayed effects, as we	Il as chronic effects produced by short and long-term exposure.				
Sensitization	SKIN: Prolonged or repeated skin contact with solutions containing from 4 to 6% sodium hypochlorite can cause allergic contact dermatitis. Symptoms include chronic itchy eczema. Sensitized people can react to very dilute solutions (0.04-0.06% NaOCI) that touch their skin.				
Mutagenic effects	Sodium hypochlorite caused mutations in several short-term studies using cultured bacteria and mammalian cells. The importance of these tests is not clear. It was not mutagenic in tests (chromosomal and micronucleus aberration) in live animals.				
Carcinogenicity	No component of this product with levels greater than or equal to 0.1% is identified as a probable, possible or confirmed human carcinogen by IARC.				
ACGIH:(American Conference of Government Industrial Hygienists)	Not listed by ACGIH.				
IARC: (International Agency for Research on Cancer)	Not listed by IARC				
NTP: (National Toxicity Program)	Not listed by NTP				
OSHA: (Occupational Safety & Health Administration)	Not listed by OSHA.				
Reproductive toxicity	A high dose of NaOCI in the drinking water caused a small but significant increase in				



According to 29 CFR 1910.1200

	abnormality in the mouse sperm.			
STOT - single expessive	Not classified			
STOT - repeated exposure	Not classified.			
Chronic toxicity	No information available.			
Aspiration hazard	No information available.			
SECTION 12. ECOLOGICAL INFORMAT	ION			
Ecotoxicity	Harmful to aquatic life at low concentrations Fish toxicity: LC50 (48 hours) rainbow trout 0.07 mg / L. LC50 (96 hours) fat head cyprine 5.9 mg / L. Invertebrate and microbe toxicity: LOEC Oncorhynchus kisutch 0.02 mg / L.			
Persistence and degradability	In fresh water, sodium hypochlorite breaks down quickly into non-toxic compounds when exposed to sunlight. In seawater, chlorine levels drop rapidly; However, hypobromite (which is extremely toxic to aquatic organisms) is formed.			
Bioaccumulative potential	This material is not expected to bioconcentrate in organisms.			
Mobility on the ground	There is no available data.			
Other adverse effects	There is no available data.			
SECTION 13 DISPOSAL CONSIDERAT	IONS			
13.1. Waste treatment methods				
	The generation of waste should be avoided or minimized wherever possible. The disposal of this product, its solutions and any derivatives must always comply with the requirements of environmental protection and waste disposal legislation and all the requirements of local authorities.			

Waste treatment methods Dispose of leftover and non-recyclable products through an authorized disposal contractor. Waste should not be disposed of down the sewer without treatment unless they are compatible with the requirements of all competent authorities. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. This product can be neutralized with sodium bisulfite, sodium thiosulfate, sodium sulfite.

WasteDispose of product residues and containers with all possible precautions. Care should be<br/>taken when handling empty containers that have not been cleaned or rinsed. Empty<br/>containers or liners may retain product residue.

### SECTION 14.- TRANSPORT INFORMATION

14.1.UN number	1791	$\land$
14.2. UN proper shipping name	HYPOCHLORITES IN SOLUTION	Will The Market
14.3. Additional information		1791
Other information	Class 8; packing group III	8
Overland transport	No additional information available.	~
Environmental risks	See section 12	
Special precautions for the user	Does not apply	



According to 29 CFR 1910.1200

SECTION 15 REGULATORY INFORMATION									
15.1 US Federal regulations									
TSCA 8(a) CDR Exer TSCA 8(b) inventario DEA List I Chemical	TSCA 8(a) CDR Exempt/Partial exemption: Undetermined. TSCA 8(b) inventario: All components are listed or exempt. DEA List I Chemicals (Precursor Chemicals): Not registered.								
SARA Section 311 /312		Im De Re Fir Su	Immediate (acute) health hazard: Yes Delayed (chronic) health hazard: Not Reactive hazard: Not Fire danger: Not Sudden Drop in Dangerous Pressure: Not						
CERCLA									
Information not availal	Information not available.								
EU-Regulations	EU-Regulations								
EPA Pesticide Registr	ation Number.		Does not apply	/.					
15.2.2. National regu	15.2.2. National regulations								
No data available.									
SECTION 16 OTHE	R INFORMAT	ION							
NFPA	NFPA health hazard	3	NFPA fire hazard	0	NFPA hazard	instability	1	NFPA Special hazard	OXI
HMIS III	Health	3	Flammability	0	Physical		1	Personal Protection	н
н	Goggles for s apron and re	splasł spirat	hes, gloves, tor for vapors.						2
Made for:	Química Pim	ia, S.	A. de C.V. Del Cobre N	No. 20 F	Parque Indust	trial. Hermosillo	o, Sonora,	México. 83297.	
Date of issue:	July 01, 200	9							
Revision date:	September (	)1, 20	23						
Revision notes:       January 23, 2017. 6 <sup>th</sup> rev. Updated according to 29 CFR 1910.1200.         May 28, 2018. 4.1 rev. Spelling and syntax modifications were made.         July 13, 2019. Section 2 Hazard identification and PPE pictograms are amended.         February 15, 20. 6.3 rev. Section 2 and 9 were modified.         September 01, 2023. 7 rev. Syntax and spelling improvements and corrections were made.									

IMPORTANT NOTE: Information in this SDS is from available published sources and is believed to be accurate, but is not exhaustive and will be used only as a guide, which is based on current knowledge of the chemical substance or mixture and apply to the appropriate product for safety precautions. No warranty, express or implied, is made and Pima Chemicals & Fertilizers, LLC and Quimica Pima, S.A. de C.V. assumes no liability resulting from the use of this SDS. The user must determine suitability of this information for his application.

End of Safety Data Sheet