

## SECTION 1: IDENTIFICATION

### 1.1. Product Identifier

**Product Name:** Liqua San

### 1.2. Intended Use of the Product

**Use of the substance/mixture:** Chlorine for Commercial Dish Machine. For professional use only.

### 1.3. Name, Address, and Telephone of the Responsible Party

#### Company

Atlanta Super Source, Inc.  
3655 Kennesaw 75 Parkway, Suite 100  
Kennesaw, GA 30144  
770-423-0006

### 1.4. Emergency Telephone Number

**Emergency Number** : 800-424-9300 CHEMTREC

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the Substance or Mixture

#### Classification (GHS-US)

Met. Corr. 1 H290

Skin Corr. 1C H314

Eye Dam. 1 H318

### 2.2. Label Elements

#### GHS-US Labeling

**Hazard Pictograms (GHS-US)** :



GHS05

**Signal Word (GHS-US)** : Danger

**Hazard Statements (GHS-US)** : H290 - May be corrosive to metals  
H314 - Causes severe skin burns and eye damage  
H318 - Causes serious eye damage

**Precautionary Statements (GHS-US)** : P234 - Keep only in original container.  
P260 - Do not breathe vapors, spray, mist.  
P264 - Wash hands, forearms, and exposed areas thoroughly after handling.  
P280 - Wear eye protection, protective gloves, protective clothing.  
P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting.  
P303+P361+P353+P363 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.  
P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 - Immediately call a POISON CENTER or doctor/physician.  
P321 - Specific treatment (see Section 4).  
P390+P391 - Collect spillage. Absorb spillage to prevent material damage.  
P405+P406 - Store locked up in a corrosive resistant container with a resistant inner liner.  
P501 - Dispose of contents/container according to local, regional, national, and international regulations.

### 2.3. Other Hazards

**Other Hazards Not Contributing to the Classification:** Corrosive to the respiratory tract.

Aquatic Acute 1

Aquatic Chronic 2

H400 - Very toxic to aquatic life

H411 - Toxic to aquatic life with long lasting effects

P273 - Avoid release to the environment



GHS09

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### 2.4. Unknown Acute Toxicity (GHS-US)

No data available

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1. Substance

Not applicable

### 3.2. Mixture

Name	Product identifier	%	Classification (GHS-US)
Sodium hypochlorite	(CAS No) 7681-52-9	15	Met. Corr. 1, H290 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Sodium hydroxide	(CAS No) 1310-73-2	3	Met. Corr. 1, H290 Skin Corr. 1A, H314 Eye Dam. 1, H318 Aquatic Acute 3, H402

Full text of H-phrases: see section 16

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of First Aid Measures

**First-aid Measures General:** Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice.

**First-aid Measures After Inhalation:** If inhaled, remove to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, seek medical advice.

**First-aid Measures After Skin Contact:** Remove contaminated clothing. Immediately flush skin with plenty of water for at least 60 minutes. Immediately call a POISON CENTER or doctor/physician.

**First-aid Measures After Eye Contact:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 60 minutes. Immediately call a POISON CENTER or doctor/physician.

**First-aid Measures After Ingestion:** Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor.

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

**Symptoms/Injuries:** Corrosive to eyes, respiratory system and skin.

**Symptoms/Injuries After Inhalation:** Corrosive to the respiratory tract.

**Symptoms/Injuries After Skin Contact:** Corrosive. Causes burns.

**Symptoms/Injuries After Eye Contact:** Causes serious eye damage.

**Symptoms/Injuries After Ingestion:** Ingestion is likely to be harmful or have adverse effects.

### 4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If medical advice is needed, have product container or label at hand.

## SECTION 5: FIRE-FIGHTING MEASURES

### 5.1. Extinguishing Media

**Suitable Extinguishing Media:** Use extinguishing media appropriate for surrounding fire.

**Unsuitable Extinguishing Media:** Do not use a heavy water stream. Use of heavy stream of water may spread fire.

### 5.2. Special Hazards Arising From the Substance or Mixture

**Fire Hazard:** Not flammable.

**Explosion Hazard:** Product is not explosive.

**Reactivity:** The substance decomposes on heating, on contact with acids and under influence of light producing toxic and corrosive gases including chlorine. The substance is a strong oxidant and reacts with combustible and reducing materials.

### 5.3. Advice for Firefighters

**Precautionary Measures Fire:** Exercise caution when fighting any chemical fire.

**Firefighting Instructions:** Do not allow run-off from fire fighting to enter drains or water courses.

**Protection During Firefighting:** Do not enter fire area without proper protective equipment, including respiratory protection.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1. Personal Precautions, Protective Equipment and Emergency Procedures

**General Measures:** Do not allow contact with metals. Do not get in eyes, on skin, on clothing. Do not breathe vapor, mist, gas.

#### 6.1.1. For Non-emergency Personnel

**Protective Equipment:** Use appropriate personal protection equipment (PPE).

**Emergency Procedures:** Evacuate unnecessary personnel.

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### 6.1.2. For Emergency Responders

**Protective Equipment:** Equip cleanup crew with proper protection.

**Emergency Procedures:** Ventilate area. Stop leak if safe to do so.

### 6.2. Environmental Precautions

Prevent entry to sewers and public waters.

### 6.3. Methods and Material for Containment and Cleaning Up

**For Containment:** Cautiously neutralize spilled liquid. Absorb/contain spill with inert material, then place in suitable container.

**Methods for Cleaning Up:** Clear up spills immediately and dispose of waste safely.

### 6.4. Reference to Other Sections

See heading 8, Exposure Controls and Personal Protection.

## SECTION 7: HANDLING AND STORAGE

### 7.1. Precautions for Safe Handling

**Additional Hazards When Processed:** Ammonium or nitrogen containing compounds can react with the sodium hypochlorite in this product releasing toxic chlorine gas.

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work.

### 7.2. Conditions for Safe Storage, Including Any Incompatibilities

**Technical Measures:** Comply with applicable regulations.

**Storage Conditions:** Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Storage areas should be periodically checked for corrosion and integrity.

**Incompatible Products:** Metals. Ammonia. Reducing agents. Combustible materials. Strong acids.

**Special Rules on Packaging:** Store in original container or corrosive resistant and/or lined container.

**7.3. Specific End Use(s)** Chlorine for Commercial Dish Machine. For professional use only.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control Parameters

Sodium hydroxide (1310-73-2)		
USA ACGIH	ACGIH Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
USA NIOSH	NIOSH REL (ceiling) (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
USA IDLH	US IDLH (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>

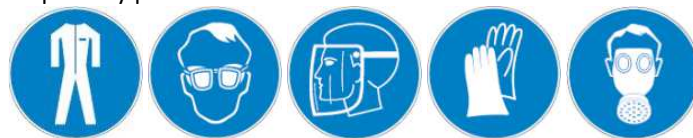
### 8.2. Exposure Controls

#### Appropriate Engineering Controls

: Ensure all national/local regulations are observed. Ensure adequate ventilation, especially in confined areas. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

#### Personal Protective Equipment

: Protective clothing. Safety glasses. Face shield. Gloves. Insufficient ventilation: wear respiratory protection.



#### Materials for Protective Clothing

: Corrosionproof clothing.

#### Hand Protection

: Wear chemically resistant protective gloves.

#### Eye Protection

: Chemical goggles or face shield.

#### Skin and Body Protection

: Wear suitable protective clothing.

#### Respiratory Protection

: Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.

#### Other Information

: When using, do not eat, drink or smoke.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on Basic Physical and Chemical Properties

#### Physical State

: Liquid

#### Appearance

: Yellowish, translucent

#### Odor

: Bleach

#### Odor Threshold

: No data available

#### pH

: 13

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<b>Relative Evaporation Rate (butylacetate=1)</b>	: No data available
<b>Melting Point</b>	: - 16 °C (3 °F)
<b>Freezing Point</b>	: No data available
<b>Boiling Point</b>	: No data available
<b>Flash Point</b>	: None
<b>Auto-ignition Temperature</b>	: No data available
<b>Decomposition Temperature</b>	: No data available
<b>Flammability (solid, gas)</b>	: No data available
<b>Vapor Pressure</b>	: No data available
<b>Relative Vapor Density at 20 °C</b>	: No data available
<b>Relative Density</b>	: 1.3 (water = 1)
<b>Solubility</b>	: Complete
<b>Partition coefficient: n-octanol/water</b>	: No data available
<b>Viscosity</b>	: No data available

**9.2. Other Information** No additional information available

## SECTION 10: STABILITY AND REACTIVITY

**10.1 Reactivity:** The substance decomposes on heating, on contact with acids and under influence of light producing toxic and corrosive gases including chlorine. The substance is a strong oxidant and reacts with combustible and reducing materials.

**10.2 Chemical Stability:** Stable under recommended handling and storage conditions (see section 7).

**10.3 Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.

**10.4 Conditions to Avoid:** Direct sunlight. Extremely high or low temperatures. Contact with metallic substances.

**10.5 Incompatible Materials:** Strong acids. Metals. Reducing agents. Combustible materials. Ammonia.

**10.6 Hazardous Decomposition Products:** Carbon oxides (CO, CO<sub>2</sub>). Chlorine gas. Sodium oxides.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information On Toxicological Effects

**Acute Toxicity:** Not classified

<b>Sodium hypochlorite (7681-52-9)</b>	
<b>LD50 Oral Rat</b>	8200 mg/kg
<b>LD50 Dermal Rabbit</b>	> 10000 mg/kg
<b>ATE (Oral)</b>	8200.000 mg/kg

**Skin Corrosion/Irritation:** Causes severe skin burns and eye damage. (pH: 13)

**Serious Eye Damage/Irritation:** Causes serious eye damage. (pH: 13)

**Respiratory or Skin Sensitization:** Not classified

**Germ Cell Mutagenicity:** Not classified

**Carcinogenicity:** Not classified

<b>Sodium hypochlorite (7681-52-9)</b>	
<b>IARC group</b>	3

**Reproductive Toxicity:** Not classified

**Specific Target Organ Toxicity (Single Exposure):** Not classified

**Specific Target Organ Toxicity (Repeated Exposure):** Not classified

**Aspiration Hazard:** Not classified

**Symptoms/Injuries After Inhalation:** Corrosive to the respiratory tract.

**Symptoms/Injuries After Skin Contact:** Corrosive. Causes burns.

**Symptoms/Injuries After Eye Contact:** Causes serious eye damage.

**Symptoms/Injuries After Ingestion:** Ingestion is likely to be harmful or have adverse effects.

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

**Ecology - General** : Toxic to aquatic life with long lasting effects.

<b>Sodium hypochlorite (7681-52-9)</b>	
<b>LC50 Fish 1</b>	0.06 (0.06 - 0.11) mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
<b>EC50 Daphnia 1</b>	0.033 - 0.044 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
<b>LC 50 Fish 2</b>	4.5 (4.5 - 7.6) mg/l (Exposure time: 96 h - Species: Pimephales promelas [Static])
<b>EC50 Daphnia 2</b>	0.033 (0.033 - 0.044) mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])

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<b>Sodium hydroxide (1310-73-2)</b>	
<b>LC50 Fish 1</b>	40 mg/l

- 12.2. Persistence and Degradability** No additional information available
- 12.3. Bioaccumulative Potential** No additional information available
- 12.4. Mobility in Soil** No additional information available
- 12.5. Other Adverse Effects** No additional information available

### SECTION 13: DISPOSAL CONSIDERATIONS

#### 13.1. Waste treatment methods

**Waste Disposal Recommendations:** Dispose of waste material in accordance with all local, regional, national, and international regulations. RCRA Waste Code: D002 (Corrosive Material).

### SECTION 14: TRANSPORT INFORMATION

In Accordance With ICAO/IATA/IMDG/DOT

#### 14.1. UN Number

**UN-No.(DOT)** : 1791  
**DOT NA no.** : UN1791

#### 14.2. UN Proper Shipping Name

**DOT Proper Shipping Name** : Hypochlorite solutions  
**Department of Transportation (DOT) Hazard Classes** : 8 - Class 8 - Corrosive material 49 CFR 173.136  
**Hazard Labels (DOT)** : 8 - Corrosive



**Packing Group (DOT)** : III - Minor Danger  
**DOT Special Provisions (49 CFR 172.102)** : IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).  
N34 - Aluminum construction materials are not authorized for any part of a packaging which is normally in contact with the hazardous material.  
T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3)  
TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling =  $95 / (1 + a (tr - tf))$  Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula:  $a = (d15 - d50) / 35d50$  Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively.  
TP24 - The portable tank may be fitted with a device to prevent the build up of excess pressure due to the slow decomposition of the hazardous material being transported. The device must be in the vapor space when the tank is filled under maximum filling conditions. This device must also prevent an unacceptable amount of leakage of liquid in the case of overturning.

**DOT Packaging Exceptions (49 CFR 173.xxx)** : 154  
**DOT Packaging Non Bulk (49 CFR 173.xxx)** : 203  
**DOT Packaging Bulk (49 CFR 173.xxx)** : 241  
**Marine pollutant** : Yes



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### 14.3. Additional Information

**Emergency Response Guide (ERG) Number** : 154

#### Transport by Sea

**DOT Vessel Stowage Location** : B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.

**DOT Vessel Stowage Other** : 26 - Stow "away from" acids

#### Air Transport

**DOT Quantity Limitations Passenger Aircraft/Rail (49 CFR 173.27)** : 5 L

**DOT Quantity Limitations Cargo Aircraft Only (49 CFR 175.75)** : 60 L

## SECTION 15: REGULATORY INFORMATION

### 15.1 US Federal Regulations

<b>Liqua San</b>	
<b>SARA Section 311/312 Hazard Classes</b>	Immediate (acute) health hazard Reactive hazard
<b>Sodium hypochlorite (7681-52-9)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Sodium hydroxide (1310-73-2)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

### 15.2 US State Regulations

<b>Sodium hypochlorite (7681-52-9)</b>
U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities
U.S. - Louisiana - Reportable Quantity List for Pollutants
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 1 and 2
U.S. - Massachusetts - Oil & Hazardous Material List - Reportable Quantity
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 1 and 2
U.S. - Massachusetts - Right To Know List
U.S. - Massachusetts - Toxics Use Reduction Act
U.S. - Michigan - Polluting Materials List
U.S. - Minnesota - Hazardous Substance List
U.S. - New Jersey - Discharge Prevention - List of Hazardous Substances
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - New Jersey - Special Health Hazards Substances List
U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
U.S. - Pennsylvania - RTK (Right to Know) List
U.S. - Texas - Effects Screening Levels - Long Term and Short Term
<b>Sodium hydroxide (1310-73-2)</b>
U.S. - California - SCAQMD - Toxic Air Contaminants - Non-Cancer Acute
U.S. - California - Toxic Air Contaminant List (AB 1807, AB 2728)
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (30 min and 8 hr)
U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations and Emission Levels (ELs)
U.S. - Idaho - Occupational Exposure Limits - TWAs
U.S. - Louisiana - Reportable Quantity List for Pollutants
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 1 and 2
U.S. - Massachusetts - Oil & Hazardous Material List - Reportable Quantity
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 1 and 2
U.S. - Massachusetts - Right To Know List
U.S. - Massachusetts - Toxics Use Reduction Act
U.S. - Michigan - Occupational Exposure Limits - Ceilings
U.S. - Michigan - Polluting Materials List
U.S. - Minnesota - Chemicals of High Concern
U.S. - Minnesota - Hazardous Substance List

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U.S. - Minnesota - Permissible Exposure Limits - Ceilings  
U.S. - New Jersey - Discharge Prevention - List of Hazardous Substances  
U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - New Jersey - Special Health Hazards Substances List  
U.S. - New York - Occupational Exposure Limits - TWAs  
U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances  
U.S. - North Dakota - Air Pollutants - Guideline Concentrations - 1-Hour  
U.S. - Oregon - Permissible Exposure Limits - TWAs  
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List  
U.S. - Pennsylvania - RTK (Right to Know) List  
U.S. - Rhode Island - Air Toxics - Acceptable Ambient Levels - 1-Hour and Annual  
U.S. - South Carolina - Toxic Air Pollutants - Maximum Allowable Concentrations  
U.S. - South Carolina - Toxic Air Pollutants - Pollutant Categories  
U.S. - Tennessee - Occupational Exposure Limits - Ceilings  
U.S. - Texas - Effects Screening Levels - Long Term and Short Term  
U.S. - Vermont - Permissible Exposure Limits - Ceilings  
U.S. - Washington - Permissible Exposure Limits - Ceilings  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 25 Feet to Less Than 40 Feet  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 40 Feet to Less Than 75 Feet  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 75 Feet or Greater  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights Less Than 25 Feet

### SECTION 16: OTHER INFORMATION, INCLUDING DATA ON DATE OF PREPARATION OR LAST REVISION

**Revision date** : 03/06/2014

**Other Information** : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

#### GHS Full Text Phrases:

Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment - Chronic Hazard Category 2
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Met. Corr. 1	Corrosive to metals Category 1
Skin Corr. 1A	Skin corrosion/irritation Category 1A
Skin Corr. 1B	Skin corrosion/irritation Category 1B
Skin Corr. 1C	Skin corrosion/irritation Category 1C
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H290	May be corrosive to metals
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H335	May cause respiratory irritation
H400	Very toxic to aquatic life
H402	Harmful to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H411	Toxic to aquatic life with long lasting effects

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*

SDS US (GHS HazCom)