

PRECAUTIONARY STATEMENTS**HAZARDS TO HUMANS & DOMESTIC ANIMALS****DANGER**

CORROSIVE: May cause severe skin irritation or chemical burns to broken skin. Causes eye damage. Wear safety glasses or goggles and rubber gloves when handling this product. Wash after handling. Avoid breathing vapors. Vacate poorly ventilated areas as soon as possible. Do not return until strong odors have dissipated.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and aquatic organisms. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or public waters unless this product is specifically identified and addressed in an NPDES permit. Do not discharge effluent containing this product to sewer systems without previously notifying the sewage treatment plant authorities. For guidance, contact your State Water Board or Regional Office of the EPA.

PHYSICAL OR CHEMICAL HAZARDS

STRONG OXIDIZING AGENT: Mix only with water according to label directions. Mixing this product with chemicals (e.g. ammonia, acids, detergents, etc) or organic matter (e.g. urine, feces, etc.) will release chlorine gas which is irritating to eyes, lungs and mucous membranes.

STORAGE AND DISPOSAL

Refillable container. Refill this container with Sodium Hypochlorite only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this procedure two more times.

Store this product in a cool, dry area away from direct sunlight and heat to avoid deterioration. **IN CASE OF SPILL:** Flood areas with large quantities of water. Product or rinsates that cannot be used should be diluted with water before disposal in a sanitary sewer. Do not reuse container, place in trash collection. Do not contaminate food or feed by storage, disposal or cleaning of equipment.

DIRECTIONS FOR USE

It is violation of federal law to use this product in a manner inconsistent with its labeling

****NOTE****

This product degrades with age. To obtain the required level of available chlorine, use a chlorine test kit and increase dosage, as necessary.

FOR INDUSTRIAL USE ONLY**SODIUM HYPOCHLORITE SOLUTION**

DISINFECTANT, SANITIZER, BACTERICIDE, DEODORANT FOR FOOD PROCESSING PLANTS, DAIRY PLANTS, FARMS, HOTELS, RESTAURANTS, TAVERNS AND SWIMMING POOLS

ACTIVE INGREDIENT

SODIUM HYPOCHLORITE 12.5%
OTHER INGREDIENT 87.5%

KEEP OUT OF REACH OF CHILDREN**DANGER****FIRST AID**

HAVE THIS PRODUCT CONTAINER LABEL WITH YOU WHEN CALLING THE POISON CONTROL CENTER OR DOCTOR, OR GOING FOR TREATMENT.

IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first five minutes, then continue rinsing eye. Flush with water for at least 15 minutes. Call a poison control center or doctor for treatment advice.

IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse immediately with plenty of water for 15-20 minutes. Wash with soap and water.

IF SWALLOWED: Call 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.

IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance then give artificial respiration, preferably by mouth-to-mouth.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.

EPA REGISTRATION NUMBER: 41934-2
EPA Est. NUMBER: 41934-PA-003
CONTENTS INCLUDE
SODIUM HYPOCHLORITE CAS # 7681-52-9
WATER CAS # 7732-18-5

FOR ASSISTANCE IN ANY EMERGENCY INVOLVING CHEMICALS CALL**CHEMTREC****1-800-424-9300**

24 hours a day 7 days a week

EMPTY CONTAINER WARNING –

After this container is empty, it may still contain toxic residues and/or explosive vapors. Observe ALL labeled precautions.

BEFORE USING READ AND UNDERSTAND MATERIAL SAFETY DATA SHEET FOR THIS PRODUCT**DIRECTIONS FOR USE (cont.)****SWIMMING POOL WATER DISINFECTION:**

For new pool or spring start-up super-chlorinate with 52-104 oz of product for each 10,000 gals of water to yield 5-10 ppm available chlorine with a test kit. Adjust and keep the pool water pH between 7.2-7.6. Adjust and maintain alkalinity of pool between 50-100 ppm. **To maintain pool** add manually or by feeder device 11 oz of product for each 10,000 gals of water to yield an available chlorine residual between 0.6-1.0 ppm by weight. Stabilized pools should maintain residual available chlorine of 1.0-1.5 ppm. Frequently test pH, available chlorine residual and alkalinity using appropriate test kits. Frequency of treatment depends on temperature and number of swimmers. **Super-chlorinate pool every 7 days or as necessary** with 52-104 oz of product for each 10,000 gals of water to yield 5-10 ppm available chlorine by weight. Check the level of available chlorine with a test kit. Do not reenter pool until chlorine residual is between 1-3 ppm. **At the end of pool season or when water is drained from pool,** chlorine must be allowed to dissipate from treated pool before discharge. Don't chlorinate pool within 24 hours before discharge. **Winterize pool** while water is still clear and clean and filter is running by adding 3 oz of product for each 1000 gals of water to obtain 3 ppm available chlorine residual using test kit. Cover pool, prepare heater, filter and heater components for winter following manufacturer instructions.

DISINFECTION OF POTABLE WATER (Public Systems)

Add 1 oz of product to every 100 gals of water and mix thoroughly. Feed solution with a hypo-chlorinator and maintain free available chlorine between 0.2-0.6 ppm throughout distribution system. Check water frequently using a chlorine test kit. Conduct bacteriological sampling at a frequency no less than that prescribed by National Primary Drinking Water Regulations (Contact your local Health Department for more details).

SANITIZING NON-POROUS FOOD CONTACT SURFACE

Rinse Method Prepare a sanitizing solution by thoroughly mixing 2 oz of product with 10 gals of water for 200 ppm available chlorine by weight. Clean equipment surfaces in normal manner. Prior to use rinse all surfaces thoroughly with sanitizing solution and maintain contact with sanitizing solution for at least 2 minutes. Do not rinse equipment with water and do not soak overnight. Solution may not be reused for sanitizing mechanical operations.

SANITIZING POROUS FOOD CONTACT SURFACE

Rinse Method Prepare a 600 ppm sanitizing solution by thoroughly mixing 6 oz of product with 10 gals of water. Clean surfaces in the normal manner. Rinse all surfaces thoroughly with sanitizing solution and maintain contact for at least 2 minutes. Prepare a 200 ppm sanitizing solution by thoroughly mixing 2 oz of product with 10 gallons of water. Prior to using equipment rinse all surfaces with the 200 ppm sanitizing solution. Do not rinse and do not soak overnight.

EGG SANITATION

Clean shell of the eggs intended for food or food products, using 1 oz of product for each 5 gals of water for 200 ppm available chlorine by weight. The solution must be equal to or warmer than the eggs, but not exceed 130 deg F. Thoroughly wet eggs with the diluted solution and allow to drain. All eggs sanitized with the diluted solution may be broken for use in the manufacture of egg products without a prior potable water rinse. Eggs must be reasonably dry before casing or breaking. Do not reuse solution for sanitizing eggs.

FOR USE IN COOLING TOWERS & EVAPORATIVE CONDENSER WATER

When system is noticeably fouled, apply 52-104 oz of product for each 10,000 gals of water in system for 5-10 ppm available chlorine. Repeat process until control is achieved. For subsequent doses when microbial control is evident, add 11 oz of product for every 10,000 gals of water in system for 1 ppm available residual chlorine. Apply as needed to maintain control and keep chlorine residual at 1 ppm. Badly fouled systems must be cleaned before treatment.

HEALTH	3
FLAMMABILITY	0
REACTIVITY	2

DOT SHIPPING NAME:

RQ, UN1791, HYPOCHLORITE SOLUTIONS, 8, PG II

**NET WEIGHT: 505 LBS.****PACKAGED BY**

George S. Coyne Chemical Co., Inc.
125 Witman Road, Reading, PA 19605
Telephone: (610) 921-2301

COYNE CHEMICAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identity: Sodium Hypochlorite Solution

Recommended use of the chemical and restrictions on use:

Supplier: Coyne Chemical
3015 State Road
Croydon, PA 19021
Telephone: +1 (215) 785-3000

Emergency Phone: For Chemical Emergency
Spill, Leak, Fire, or Accident
Call **CHEMTREC** Day or Night
Within USA and Canada: 1-800-424-9300
Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

SDS Date of Preparation: 1/22/2015

2. HAZARDS IDENTIFICATION

GHS Classification:

Physical:	Health:	Environmental
None	Eye Corrosion Category 1 Skin Corrosion Category 1B	Aquatic Acute Toxicity Category 2

GHS Label Elements:

Danger!



Statements of Hazard

H314 Causes severe skin burns and eye damage.
H401 Toxic to aquatic life.
EUH031 Contact with acids liberates toxic gas.

Prevention

P260 Do not breathe mist, vapors, or spray.
P264 Wash thoroughly after handling.
P273 Avoid release to the environment.
P280 Wear protective gloves, protective clothing, eye protections and face protection.
P391 Collect spillage.
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.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water

or shower.

P310 Immediately call a POISON CENTER or doctor.

P363 Wash contaminated clothing before reuse.

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P310 Immediately call a POISON CENTER or doctor.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P310 Immediately call a POISON CENTER or doctor.

P405 Store locked up.

P501 Dispose of contents and container in accordance with local and national regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No.	Amount
Water	7732-18-5	84.37-88.13%
Sodium Hypochlorite	7681-52-9	11.87-15.63%
Sodium Chloride	7647-14-5	>1%
Carbonic Acid Sodium Salt	497-19-8	>1%
Sodium Hydroxide	1310-73-2	1%

4. FIRST AID MEASURES

Eye: Immediately flush eyes with plenty of water for at least 20 minutes while holding the eyelids apart. Get immediate medical attention.

Skin: Immediately flush skin with plenty of water for 30 minutes while removing contaminated clothing and shoes. Get immediate medical attention. Launder clothing before re-use. (Discard contaminated shoes).

Ingestion: Do NOT induce vomiting. If conscious, give large quantities of water or milk. Never give anything by mouth to an unconscious or convulsing person. Get immediate medical attention.

Inhalation: Immediately remove victim to fresh air. If breathing is difficult, oxygen should be administered by qualified personnel. If breathing has stopped, administer artificial respiration. Get immediate medical attention.

Most important Symptoms: Causes severe eye and skin irritation and burns. If swallowed, may cause burns to mouth, throat, and stomach. May be fatal if swallowed in large amounts. Inhalation of mists may cause severe irritation and burns to respiratory tract.

Indication of immediate medical attention/special treatment: Immediate medical attention is required for eye, skin contact, and ingestion.

5. FIRE FIGHTING MEASURES

Suitable (and Unsuitable) Extinguishing Media: Use extinguishing media appropriate for surrounding fire. Do not use Mono Ammonium Phosphate (MAP) type extinguishers directly on this product.

Specific hazards arising from the chemical: Sodium hypochlorite decomposes and releases oxygen when heated, which may increase the intensity of an existing fire. Decomposition products may cause containers to rupture or explode. Thermal decomposition yields oxygen, hydrogen chloride, acids fumes, toxic and corrosive chlorine gas.

Special Protective Equipment and Precautions for Fire-Fighters: Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing. Cool fire exposed containers with water spray. Avoid releases to the environment.

Explosion Data (sensitivity to mechanical impact or static discharge): Not explosive.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures: Evacuate spill area and keep unprotected personnel away. Do not breathe vapors or mists. Ventilate area. Prevent contact with the eyes, skin and clothing. Wear appropriate protective clothing. Keep away from heat, flames and high temperatures. Avoid releases to the environment.

Methods and Materials for Containment and Cleaning Up: Stop flow if possible. Dike area and contain. Collect using an inert absorbent material and place in appropriate containers for disposal. Do not use combustible materials such as sawdust. Report releases as required by local, state and federal authorities.

7. HANDLING AND STORAGE

Precautions for Safe Handling: Prevent contact with the eyes, skin and clothing. Do not breathe vapors or mists. Wear protective clothing and equipment. Use only with adequate ventilation. Wash thoroughly with soap and water after handling. Keep containers closed when not in use. Wash clothing before re-use. If closed containers become heated, vent to release decomposition products (mainly oxygen under normal decomposition).

Always add acid to water- not water to acid. Adding water to acid generates heat and will cause dangerous boiling and splashing.

Do not reuse containers. Empty containers retain product residues which can be hazardous. Follow all SDS precautions when handling empty containers.

Conditions for Safe Storage, Including Any Incompatibilities: Store in a cool, dry, well ventilated area away from incompatible materials. Keep container tightly closed. Store in air-tight, acid proof containers at room temperature.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines:

Water	None Established
Sodium Hypochlorite	2 mg/m ³ STEL AIHA WEEL 1 ppm Ceiling OSHA PEL (as Chlorine) 0.5 ppm TWA, 1 ppm STEL ACGIH TLV (as Chlorine)
Sodium Chloride	1 ppm Ceiling OSHA PEL (as Chlorine) 0.5 ppm TWA, 1 ppm STEL ACGIH TLV (as Chlorine)
Carbonic Acid Sodium Salt	None Established
Sodium Hydroxide	2 mg/m ³ Ceiling ACGIH TLV 2 mg/m ³ TWA OSHA PEL

Engineering Controls: Use with adequate general or local exhaust ventilation to maintain exposures below the occupational exposure limits.

Respiratory Protection: In operations where exposure levels are excessive, an approved respirator with acid gas cartridges or supplied air respirator should be used. Respirator selection and use should be based on contaminant type, form and concentration. Follow applicable regulations and good Industrial Hygiene practice.

Skin Protection: Impervious gloves such as rubber, neoprene or vinyl are recommended.

Eye Protection: Chemical safety goggles or faceshield should be worn where splashing is possible.

Other: Impervious coveralls, apron and boots is required to prevent skin contact and contamination of personal clothing. A safety shower and eye wash should be available in the immediate work area.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor: Colorless to light yellow-green liquid with chlorine odor.

Physical State: Liquid	Odor Threshold: 0.9 ppm approximate
Vapor Density: 1	Initial Boiling Point/Range: Decomposes above 230°F (110°C)
Solubility In Water: Soluble	Vapor Pressure: 12.1 mmHg @ 68°F (20°C)
Relative Density: 1.190-1.215	Evaporation Rate: Not determined
Melting/Freezing Point: -14°F (-25.56°C) Approximately	pH: 12 @ 100 g/L
VOC Content: 0%	Octanol/Water Coefficient: Not determined
Solubility: Soluble in water	Decomposition Temperature: >230°F (110°C)
Viscosity: Not determined	Flammability (solid, gas): Not applicable
Flashpoint: None	Autoignition Temperature: None
Flammable Limits: LEL: Not applicable UEL: Not applicable	

10. STABILITY AND REACTIVITY

Reactivity: Not normally reactive

Chemical Stability: Stable under normal storage and handling conditions. Slowly decomposes on contact with air. Decomposition rate increases with temperature, concentration, exposure to sunlight and contamination by metals.

Possibility of Hazardous Reactions: Will not occur under normal storage and handling conditions. Will react violently with many organic compounds including greases, oils, fuels, ect.

Conditions to Avoid: Keep away from heat, flames and high temperatures.

Incompatible Materials: Strong oxidizers, heavy metals, reducing agents, organics, ether, ammonia, and acids.

Hazardous Decomposition Products: When heated to decomposition emits oxygen, hydrogen chloride, acids fumes, toxic and corrosive chlorine gas.

11. TOXICOLOGICAL INFORMATION

HEALTH HAZARDS:

Eye: Causes severe irritation and burns with pain, tearing, and redness. May cause permanent eye damage, vision impairment, and blurred vision.

Skin: Causes severe irritation and burns with redness, ulceration, pain and dermatitis. Prolonged skin exposure may cause destruction of the skin with impairment of the skin to regenerate at the site of contact.

Ingestion: Ingestion causes severe digestive tract irritation or burns to the mucous membranes of the mouth and esophagus with abdominal pain, nausea, vomiting, diarrhea, confusion, delirium and coma. Ingestion may be fatal.

Inhalation: Inhalation of vapors or mists may cause severe irritation and burns of the nose, throat and upper respiratory tract. Prolonged inhalation may cause pulmonary edema.

Chronic: Prolonged or overexposure may cause damage to eyes, skin and mucous membranes. Repeated inhalation exposure may cause impairment of lung function and permanent lung damage. Ingestion of high concentrations may cause injuries to liver, kidneys and central nervous system.

Sensitization: Sodium hypochlorite has been reported to cause sensitization in some individuals.

Carcinogenicity: None of the components present are listed as a carcinogen or suspected carcinogen by IARC, NTP, ACGIH, OSHA or the EU Substance Directive.

Germ Cell Mutagenicity: Sodium hypochlorite has tested positive in in-vitro test systems, and negative in in-vivo test systems. These results are consistent with other germicides.

Reproductive Toxicity: None currently known for the mixture.

Numerical Measures of Toxicity:

Sodium Hypochlorite: Oral rat LD50 – 8200 mg/kg

Sodium Chloride: Oral rat LD50 – 3000 mg/kg; Inhalation rat LC50 - 42000 mg/m³/1hr; Skin rabbit LD50 – 10000 mg/kg

Carbonic Acid Sodium Salt: Oral rat LD50- 4090 mg/kg; Inhalation rat LC50 – 2300 mg/m³/2hr

Sodium Hydroxide: Oral rat LD50 – 140 -340 mg/kg; Skin rabbit LD50 – 1350 mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity:

Product: 96 hr LC50 Bluegill sunfish – 2.90 mg/L; 96 hr LC50 Fathead minnow – 1.40 mg/L

This product is classified as toxic to the aquatic environment. Releases to the environment should be avoided.

Persistence and Degradability: This product is inorganic and not subject to biodegradation. This material is believed not to persist in the environment.

Bioaccumulative Potential: This material is not expected to bioconcentrate in organism.

Mobility in Soil: No data available

Other Adverse Effects: No data available

13. DISPOSAL CONSIDERATIONS

Dispose in accordance with local and national environmental regulations.

14. TRANSPORT INFORMATION

DOT Hazardous Materials Description:

Proper Shipping Name: Hypochlorite Solution

UN Number: UN1791

Hazard Class/Packing Group: 8, PG II

Labels Required: Corrosive

Note: This product has an RQ of 666 lbs (Sodium Hypochlorite RQ 100 lbs)

IMDG Shipping Name: Hypochlorite Solution

IMDG Hazard Class: 8, PG II

UN Number: UN1791

IMDG Hazard Labels Required: Corrosive

IATA Shipping Name: Hypochlorite Solution

IATA Hazard Class: 8, PG II

UN Number: UN1791

IATA Hazard Labels Required: Corrosive

15. REGULATORY INFORMATION

CERCLA 103 Reportable Quantity: This product has an RQ of 666 lbs (based on the RQ of Sodium Hypochlorite of 100 lbs present at 15%). Some states have more stringent reporting requirements. Report all spills in accordance with local, state, and federal regulations.

Hazard Category for Section 311/312: Acute Health

Section 313 Toxic Chemicals: This product contains the following chemicals subject to SARA Title III Section 313 Reporting requirements: None

Section 302 Extremely Hazardous Substances (TPQ): None

INTERNATIONAL CHEMICAL INVENTORY STATUS:

Australia AICS: All the components are listed.

Canada DSL: All the components are listed.

China IECSC: All the components are listed.

European Union EINECS: All the components are listed.

Japan ENCS: All the components are listed.

Korea KECL: All the components are listed.

New Zealand: All the components are listed.

Philippines PICCS: All the components are listed.

United States TSCA: All the components are listed.

16. OTHER INFORMATION

NFPA Rating: Health = 2 Fire = 0 Instability = 1
HMIS Rating: Health = 3 Fire = 0 Physical Hazard = 2

Revision Summary:

11/16/07: New SDS

1/30/13: Updated format, updated Section 3: Composition, Section 8: Exposure Limits, Section 11: Toxicological information, Section 12: Ecological information, Section 14: Packing group, and Section 16: NFPA/HMIS Ratings.

1/19/15: Updated name and changed component percentages to weight percent.

NOTICE

This above information is believed to be correct but does not propose to be all inclusive and shall be used only as a guide. Coyne Chemical shall not be held liable for any damage resulting from handling or from contact with the above product. This information relates only to the product designated herein and does not relate to its use in combination with any other material or process.