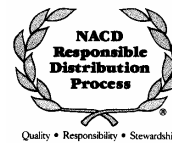




Material Safety Data Sheet



Date Prepared: 2/12/08

Supersedes: 12/27/07

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product: **CHLORINATING SOLUTION**
For Chlorination of Swimming Pools
EPA Reg. No.: 9613-20001-17071

Manufacturer/Supplier: Riverside Chemical Company

Address: 871 River Road
North Tonawanda, NY 14120

General Assistance: 716-692-1350

e-Mail Contact: MSDS@rivchem.com

24 Hour Emergency: 800-424-9300 (Chemtrec)

Chemical Name: Sodium Hypochlorite

Synonyms: Chlorine bleach, Soda bleach

Chemical Formula: NaOCl + H₂O

Product Use(s): Sanitation of swimming pool water.

2. HAZARDS IDENTIFICATION

Emergency Overview

DANGER! Corrosive. May cause severe skin irritation or chemical burns to broken skin. Causes eye damage. May be fatal if swallowed.

The following information is provided for people trained in the HMIS[®] (*Hazardous Materials Identification System*) or the NFPA (*National Fire Protection Association*) rating programs. These ratings should be used with a fully implemented program.

<u>HMIS Rating</u>		<u>Key</u>		<u>NFPA</u>
Health:	3	0 = Minimal	3 = Serious	Health: 3
Flammability:	0	1 = Slight	4 = Severe	Flammability: 0
Reactivity:	1	2 = Moderate	* = Chronic	Reactivity: 1

Routes Of Entry:

Inhalation Eyes Skin Ingestion

Riverside Chemical Company, Inc.

A Responsible Distribution ProcessSM Company

Irritancy: Liquid, vapors or mist may irritate or burn eyes, skin and respiratory tract.

Sensitizing Capability: None known.

Reproductive Effects: None known.

Cancer Information: None known.

Short-Term Exposure (Acute)

Inhalation: Exposure to vapor, mist or liquid can produce burns of the respiratory tract. Severe exposure could result in pulmonary edema.

Eyes: Contact can cause severe damage including burns and blindness. The severity of the effects depends on concentration and how soon after exposure the eyes are washed.

Skin: Corrosive. Contact may cause irritation or burns and tissue damage.

Ingestion: Corrosive. Contact may cause irritation or burns and tissue damage.

Repeated or Long-Term Exposure (Chronic)

Synergistic Materials: None known.

Medical Conditions Aggravated by Exposure: Preexisting skin and eye disorders may be aggravated by exposure to this product.

Carcinogen Status: Not list as a suspected carcinogen by: OSHA, NTP, or IARC.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Components/ Common Names	CAS No.	Percent (wt.)	OSHA Hazard	Exposure Limits
Sodium Hypochlorite (Bleach)	7681-52-9	12 - 15%	Yes	PEL = not established TLV = 1 ppm as Cl ₂ STEL = 2 mg/m ³
		AIHA (WEEL) recommended 15 minute		
Sodium Hydroxide (Caustic Soda)	1310-73-2	0 - 1%	Yes OSHA	PEL = 2 mg/m ³ Ceiling = 2 mg/m ³
Sodium Chloride (Salt)	7647-14-5	11 - 14.5%	Yes	Airborne limit not established
Water	7732-18-5	70 - 76%	No	PEL = not established TLV = not established

4. FIRST AID MEASURES

Eyes:

Immediately flush eyes with a direct stream of water for at least 15 minutes while forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. Washing eyes within several seconds is essential to achieve maximum effectiveness. GET MEDICAL ATTENTION IMMEDIATELY.

Skin:

Flush thoroughly with plenty of cool water under shower while removing contaminated clothing and shoes. Use soap if available. Thoroughly clean and dry contaminated clothing and shoes before reuse. If irritation persists, GET MEDICAL ATTENTION AS SOON AS POSSIBLE.

Inhalation:

If adverse effects occur, remove to uncontaminated area. If breathing is difficult, have a trained person administer oxygen. If respiration stops, have a trained person administer artificial respiration. GET MEDICAL ATTENTION IMMEDIATELY.

Ingestion:

Never give anything by mouth to an unconscious person. If swallowed, DO NOT INDUCE VOMITING. Rinse mouth of any residual chemical, then give large quantities of water. If vomiting occurs spontaneously, keep airway clear and give more water. Keep person at rest and GET MEDICAL ATTENTION IMMEDIATELY or contact the Poison Control Center at 800-888-7655.

Notes To Physician:

The absence of visible signs or symptoms of burns does NOT reliably exclude the presence of actual tissue damage.

5. FIRE FIGHTING MEASURES

Flash Point, TCC (°F): Not flammable

Autoignition Temperature (°F): Not Flammable

Flammable Limits in Air (% Vol.):

Upper (UEL): Not Applicable

Lower (LEL): Not Applicable

Fire and Explosion Hazard: May release toxic gases.

Extinguishing Media: Use extinguishing media appropriate for the surrounding fire. Use water spray to keep fire-exposed containers cool.

Fire Fighting Procedures: Clear area of unnecessary and unprotected personnel. Toxic gases will form upon decomposition. Fire fighters should wear NIOSH/MSHA approved positive-pressure self-contained breathing apparatus and full protective clothing.

Sensitivity to Mechanical Impact: Not sensitive.

Sensitivity to Static Discharge: Not sensitive.

Decomposition Products Under Fire Conditions: Hydrogen chloride, chlorine. Vigorous reaction possible with organic materials or oxidizing agents and may result in fire.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:

Unnecessary personnel should be evacuated upwind of the release area. Ventilate area of leak or spill. Keep unnecessary and unprotected personnel from entering area. Those responding to the incident must wear protective equipment appropriate to the hazards. Follow protective measures provided under Personal Protection in Section 8.

Environmental Precautions:

According to 40 CFR 302 Table 302.4 (CERCLA), environmental releases that exceed the 100 lb. RQ must be reported to the National Emergency Response Center by calling 800-424-8802 (202-426-2675) and the State Emergency Response Commission and the Local Emergency Planning Committee (40 CFR 355.40) as appropriate. Also see Section 15 for the Reportable Quantity (RQ).

Methods for Cleaning Up:

Liquid materials should be diked to prevent their flow to the ground or waterways. If it can be done safely, stop or control any continued release of material from its normal containment (i.e., close valve or invert a leaking drum). Not do absorb spills with combustible materials such as sawdust. For large spills, pump product into marked polyethylene containers for future recovery or proper disposal. Small spills or residue should be diluted with a large quantity of water and then neutralized prior to disposal. (See Section 13) Aquatic toxicity for this product is not established, but if not significantly diluted, it may seriously affect aquatic life.

CAUTION: Do not allow this product to mix with acid as it will off-gas toxic chlorine gas.

7. HANDLING AND STORAGE

Do not take internally. Do not get in eyes, on skin, or on clothing. Use with adequate ventilation and avoid breathing mist or vapors. When handling, wear proper protective equipment including impervious gloves, and chemical resistant clothing and boots. Also wear goggles or face shield as appropriate. Wash thoroughly after handling all chemical products. Wash contaminated clothing before reuse.

Do not store adjacent to incompatible chemicals that may react in the event of spillage. (Refer to Section 10.)

Recommended Storage Temperature: Cool/Ambient and prevent from freezing.

Recommended Shelf Life: This product is stable but will decompose over time. Store product indoors in its original tightly sealed container. The exact rate of decomposition is dependant on temperature, exposure to direct sun light, and introduction of contaminants. If stored for extended

periods of time, the product will still be effective as a sanitizing agent, but its potency will be diminished and it will require a larger dose.

Special Mixing and Handling Instructions: Do not mix with acids or other incompatible materials.

General Hazards: “Empty” containers retain product residue (liquid and/or vapor) and can be dangerous. DO NOT pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. Returnable containers must comply with all DOT, federal, and state regulations. They should have a legible label and be thoroughly emptied (less than 1 inch of residue) and properly sealed prior to their return. Once emptied, they should be returned to Riverside Chemical or a reputable drum reconditioner. One gallon containers are not returnable. These containers should be triple rinsed with water and then disposed of in a trash receptacle. The rinse water should be collected and used when making future dilutions of this product

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls:

No special ventilation is required under normal conditions of use. (See Section 3 for PELs.) Provide local exhaust ventilation where vapor or mist may be generated to ensure compliance with exposure limits.

Personal Protection

Respiratory:

Respiratory protection is not required under normal conditions of use. When concentrations in air may exceed the recommended exposure limits (refer to Section 3) and other means of exposure reduction are not adequate, wear a NIOSH approved respirator with N95 (dust, fume, mist) filters following the manufacturer’s recommendations. When decomposition products exist, acid gas cartridges are also required.

Eye/Face:

Wear chemical safety goggles when handling this product, especially when there is a potential for splashing. (ANSI Z87.1) The additional use of a face shield may be appropriate in areas having a high probability of splashing. Emergency shower and eyewash facilities should be in close proximity. (ANSI Z358.1)

Skin:

Wear chemical resistant clothing, rubber boots and gloves when potential for contact with this material exists. Recommended materials include natural rubber, neoprene, nitrile, and polyvinyl chloride (PVC). Thoroughly wash contaminated clothing before reuse.

Other:

Discard shoes that cannot be decontaminated.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid

Appearance and Odor: Colorless to pale yellow/green liquid with characteristic chlorine bleach odor

Odor Threshold: 2 ppm (approximate)

Specific Gravity @ 20°C (Water = 1): 1.2

Density, lb./gal. @ 20°C: 10.2

Boiling Point: 101°C (214°F) with decomposition starting at 40°C

Freezing Point: -25°C (-13°F)

Vapor Pressure, mm Hg @ 20°C: 17.5

Vapor Density (Air = 1): 1.3

Evaporation Rate (n-BuAc = 1): Unknown

Percent Volatiles by Wt.: Unknown

VOC (g/l by Wt.): N/A

Solubility in Water @ 20°C: 100%

Viscosity @ 20°C (cSt): Unknown

pH (Concentrated Solution): 12

Octanol/Water Partition Coefficient: Not Available

10. STABILITY AND REACTIVITY

Reactivity: Stable, but slowly decomposes upon heating or contact with air. Decomposition rate increases with product concentration, temperature, and exposure to sunlight.

Conditions to Avoid: Do not mix or store with acids or reducing agents. Avoid excessive heat (>40°C), flames, sparks and other sources of ignition. Avoid extended periods of direct sunlight.

Incompatibilities: Avoid contact with acids, ammonia compounds, oxidizable materials, peroxides, reducing agents, heavy metals, organics, and ether. Product is corrosive to most metals.

Polymerization: Will not polymerize.

Hazardous Decomposition Products:

Combustion products: Hydrogen chloride, chlorine

Thermal decomposition products: Chlorine containing gases

Also see Handling and Storage (Section 7).

11. TOXICOLOGY INFORMATION

The toxicity and corrosivity of this product is a function of concentration and pH. This material is irritating and may be corrosive to all tissue. Inhalation may cause coughing, choking, irritation and pulmonary edema. Eye contact may be irritating or corrosive with permanent damage (blindness). Skin contact may be irritating and corrosive. Long term skin exposure may result in dermatitis. Ingestion is not a normal route of exposure. Ingestion may cause irritation, corrosion of gastrointestinal tract, pain and vomiting.

12. ECOLOGICAL INFORMATION

Ecological Effects: 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 authority. For guidance, contact your State Water Board or Regional Office of the EPA.

Environmental Fate Data: This material is inorganic and not subject to biodegradation.

Persistence: This material is believed not to persist in the environment.

Bioconcentration: This material is believed not to bioaccumulate.

Other Ecological Information: This material may be harmful to aquatic life in low concentrations.

13. DISPOSAL CONSIDERATIONS

Recovery and reuse, rather than disposal, should be the ultimate goal of handling efforts. If the waste stream can not be reclaimed, the recommended route of disposal is neutralization with an appropriate reducing agent such as bisulfites, thiosulfate, or ferrous salt solutions. Some heat will be produced with this reaction. Dilute with copious amounts of water and be sure to keep the solution alkaline (pH >7). The main end-product is salt water. Be sure to comply with all applicable governmental regulations.

Small containers, i.e., 1 gallon, should be triple rinsed and disposed of in a sanitary landfill in accordance with all applicable regulations.

Hazardous Waste Number: D002 (Corrosivity)

Also refer to Sections 5, 6, and 15 for additional information.

14. TRANSPORTATION INFORMATION

DOT Identification Number: UN1791

DOT Proper Shipping Name: Hypochlorite Solution

DOT Hazard Class: 8 (Corrosive)

DOT Packing Group: III
DOT Reportable Quantity (RQ): 100 lb. as sodium hypochlorite
DOT Marine Pollutant(s): Not Applicable
Additional Requirements: Not Applicable

15. REGULATORY INFORMATION

NOTICE: The information herein is presented in good faith and believed to be accurate as of the date prepared. However, no warranty, expressed or implied, is given. Regulatory requirements are complex and subject to change. They may also differ from one location or application to another. It is the buyer's responsibility to ensure that their activities comply with all federal, state or provincial, and local laws.

U.S. Federal Regulations:

This product is hazardous as defined in OSHA Standard 29 CFR 1910.1200. As a result, this information must be provided to employees regarding the hazards of this product by means of a hazard communication program, including: labeling, Material Safety Data Sheets (MSDS), training and access to written records. We request that you make all information in this MSDS available to your employees.

TSCA: All components of this substance are listed on the TSCA inventory or are exempt from the inventory.

TSCA 12(b) Export Notification: Not listed.

CERCLA Section 103 Yes – Sodium Hypochlorite: 100 lb. RQ
Yes – Sodium Hydroxide: 1,000 lb. RQ

SARA Section 302 No

SARA Section 304 No

SARA Section 311/312

Acute Hazard Yes

Chronic Hazard No

Fire Hazard Yes

Reactivity Hazard No

Sudden Release Hazard No

SARA 313 Chemicals No

OSHA Process Safety Not regulated

State Regulations:

Consult with your state regulatory agencies to determine which regulations may apply to the use of this product in your particular application.

Other U.S. Regulations:

Federal Insecticide, Fungicide and Rodenticide Act (FIFRA): Registered pesticide

EPA Reg. No.: 9613-20001-17071
EPA EST No.: 17071-NY-001

Canadian Regulations:

WHMIS Classification D2B, E
Domestic Substance List (DSL) .. All components of this product are listed on the DSL.

International Regulations:

Consult the regulations of the importing country.

16. OTHER INFORMATION

This Material Safety Data Sheet was produced from a variety of reliable technical and industry sources. However, it is provided without representation or warranty expressed or implied regarding accuracy or correctness. Conditions of use are beyond the control and knowledge of Riverside Chemical Company, who does not assume any responsibility and expressly disclaims liability for injury, loss, damage or expenses arising from the use of this product.

For additional non-emergency information, you may call 716-692-1350 or write to:

Riverside Chemical Company
P.O. Box 197
North Tonawanda, NY 14120-0197

Revision Summary:

Revision:	Sec/Para Changed	Change Made:	Date
0	N/A	Initial issue of document	–
1	Entire document	Extensive updates to the new 16 part format.	2/3/06
2	1,2,3 & 14	Add e-mail address, switch order of sections 2 & 3, and switch order of DOT shipping name to comply with Global Harmonization guidelines.	12/27/07
3	8	Correct reference to section 3 that was switched in December.	2/12/08