UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

July 22, 2015

Gary Smart
Corporate Environmental Compliance Specialist
Hill Brothers Chemical Company
7121 West Bell Road, Suite 250
Glendale, AZ 85308

Subject: Label Amendment – To change product name and update label
Product Name: SODIUM HYPOCHLORITE-5.25%
EPA Registration Number: 266-40
Application Date: April 7, 2015
Decision Number: 503735

Dear Mr. Smart:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

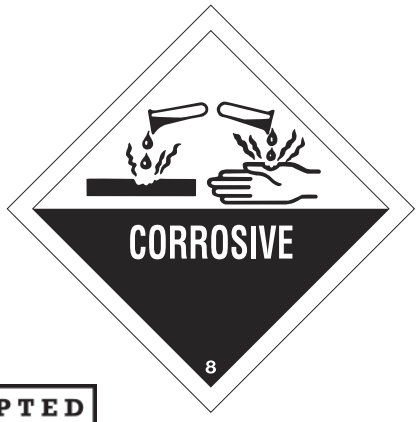
Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. If you have any questions, please contact Wanda Henson by phone at (703) 308-6345, or via email at henson.wanda@epa.gov.

Sincerely,

Demson Fuller, Product Manager 32
Regulatory Management Branch II
Antimicrobials Division (7510P)
Office of Pesticide Programs

Enclosure



ACCEPTED
07/22/2015
Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under
EPA Reg. No.
266-40

UN1791
HYPOCHLORITE SOLUTIONS

SODIUM HYPOCHLORITE – 5.25%

EPA Est. No. 266-AZ-1 EPA Reg. No. 266-40

ACTIVE INGREDIENT:	% BY WT.
SODIUM HYPOCHLORITE	5.25%
INERT INGREDIENTS	94.75%
TOTAL	100.0%

KEEP OUT OF REACH OF CHILDREN
DANGER

FIRST AID	
IF IN EYES	• Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. • Call a Poison Control Center or Doctor for advice.
IF ON SKIN OR CLOTHING	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a Poison Control Center or Doctor for advice.
IF SWALLOWED	• Call a Poison Control Center or Doctor immediately for treatment or 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 mouth-to-mouth if possible. • Call a Poison Control Center or Doctor for further treatment advice.
NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.	

Have the product container or label with you when calling a poison control center or doctor or going for treatment.
For emergency information on product, use, etc., call the National Pesticides Information Center at 1-800-858-7378, 6:30 AM to 4:30 PM Pacific time (PT), seven days a week. During other times, call the poison control center 1-800-222-1222.

DIRECTIONS FOR USE

IT IS A VIOLATION OF FEDERAL LAW TO USE THIS PRODUCT IN A MANNER INCONSISTENT WITH ITS LABELING.

See Directions for Use on enclosed brochure.

NET CONTENTS:

☐ **300 GALLONS** ☐ **52 GALLONS**
☐ **50 GALLONS** ☐ **30 GALLONS**
☐ **13 GALLONS** ☐ **6 GALLONS**

☐ _____ **GALLONS**

NSF

Maximum use level under NSF/ANSI standard 60 Liquid Bleach 5.25%.....200mg/L

DANGER

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS: CORROSIVE. Causes irreversible eye damage and skin burns. Do not get in eyes, on skin, or on clothing. Wear goggles or face shield and rubber gloves when handling this product. Avoid breathing vapors. Vacate poorly ventilated areas as soon as possible. Do not return until odors have dissipated. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

ENVIRONMENTAL HAZARDS: This pesticide is toxic to fish and aquatic organisms. Do not discharge effluent containing this product into lakes, streams, estuaries, oceans, or public waters unless in accordance with the requirements of the National Pollutant Discharge Elimination Systems (NPDES) permit and the Permitting Authority has been notified in writing prior to discharge. 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.

PHYSICAL AND CHEMICAL HAZARDS: STRONG OXIDIZING AGENT: Mix only with water according to label directions. Mixing this product with gross filth such as feces, urine, etc., or with ammonia, acids, detergents, or other chemicals will release hazardous gases irritating to eyes, lungs, and mucous membranes.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage, disposal or cleaning of equipment. 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. Refillable Container. Refill this container with Sodium Hypochlorite only. Do not reuse this container for any other purpose.

Manufactured by:
HILL BROTHERS CHEMICAL COMPANY
4450 N. 42nd Ave., Phoenix, AZ 85019 (602) 272-9363
FOR 24 HOUR EMERGENCY INFORMATION CALL CHEMTREC: (800) 424-9300
Branch Locations: Industry, San Jose, CA; Phoenix, Tucson, AZ; Salt Lake, UT

DIRECTIONS FOR USE
Sodium Hypochlorite – 5.25%
EPA Reg. No. 266-40
EPA Est. No. 266-AZ-1

IT IS A VIOLATION OF FEDERAL LAW TO USE THIS PRODUCT IN A MANNER INCONSISTENT WITH ITS LABELING.

To achieve available chlorine (By Weight)	Gallons Water	Add liquid ounces of 5.25% Sodium Hypochlorite
5 PPM	100	1.0
10 PPM	100	2.0
15 PPM	100	3.5
25 PPM	100	5.5
35 PPM	100	8.0
50 PPM	100	11.5
100 PPM	10	2.0
200 PPM	10	4.5
500 PPM	10	11.5
600 PPM	10	14.0
1000 PPM	10	23.0
5000 PPM	10	125.0
10,000 PPM	10	280.0

NOTE: This product degrades with age. Use a chlorine test kit and increase dosage as necessary to obtain the required level of available chlorine.

SWIMMING POOL WATER DISINFECTION

For a new pool or spring start up, super chlorinate with 110 to 230 oz. of product for each 10,000 gallons of water to yield 5 to 10 ppm available chlorine by weight. Check the level of available chlorine with test kit. Adjust and maintain pool water pH to between 7.2 and 7.6. Adjust and maintain the alkalinity of the pool to between 50 to 100 ppm.

To maintain the pool, add manually or by a feeder device 20 oz. of this product for each 10,000 gallons of water to yield an available chlorine residual between 0.6 to 1.0 ppm by weight. Stabilized pools must maintain a residual of 1.0 to 1.5 ppm available chlorine. Test the pH, available chlorine residual, and alkalinity of the water frequently with appropriate test kits. Frequency of water treatment will depend upon temperature and numbers of swimmers.

Every 7 days, or as necessary, super chlorinate the pool with 110 to 230 oz. of product for each 10,000 gallons of water yield 5 to 10 ppm available chlorine by weight. Check the level of available chlorine with a test kit. Do not reenter pool with a chlorine residual above 4.0 ppm due to risk of bodily harm.

At the end of the swimming pool season or when the water is to be drained from the pool, chlorine must be allowed to dissipate from the treated pool water before discharge. Do not chlorinate the pool within 24 hours prior to discharge.

WINTERIZING POOLS – While water is still clear & clean apply 7 oz. product per 1,000 gallons while filter is running to obtain 3 ppm available chlorine residual as determined by a suitable test kit. Cover pool prepare heater filter and heater components for winter by following manufacturer's instructions.

SPAS, HOT TUBS, IMMERSION TANKS, ETC.

SPAS/HOT TUBS – Apply 12 oz. of product per 1,000 gallons of water to obtain a free available chlorine concentration of 5 ppm as determined by a suitable chlorine test kit. Adjust and maintain water pH to between 7.2 and 7.8. Some oils, lotions, fragrances, cleaners, etc. cause foaming or cloudy water, as well as reduce the efficiency of the product. Do not reenter water with a chlorine residual above 4.0 ppm due to risk of bodily harm.

To maintain the water, apply 12 oz. of product per 1,000 gallons of water over the surface to maintain a chlorine concentration of 5 ppm.

After each use, shock treat with 16 oz. of this product per 500 gallons of water to control odor and algae. During extended periods of disuse, add 7 oz. of product daily per 1,000 gallons of water to maintain a 3 ppm chlorine concentration.

SANITIZATION OF POROUS FOOD CONTACT SURFACES SPRAY/FOG METHOD

Pre-clean all surfaces after use. Prepare a 600 ppm available chlorine sanitizing solution of sufficient size by thoroughly mixing the product in a ratio of 14 oz. product with 10 gallons of water. Use spray or fogging equipment which can resist hypochlorite solutions. Always empty and rinse spray/fog equipment with potable water after use. Thoroughly spray or fog all surfaces until wet allowing excess sanitizer to drain. Vacate area for at least 2 hours. Prior to using equipment rinse all surfaces with a 200 ppm available chlorine solution. Prepare a 200 ppm sanitizing solution by thoroughly mixing 5 oz. of this product with 10 gallons of water.

SANITIZATION OF NONPOROUS FOOD CONTACT SURFACES SPRAY/FOG METHOD

Pre-clean all surfaces after use. Use a 200 ppm available chlorine solution to control bacteria, mold, or fungi and a 600 ppm solution to control bacteriophage. Prepare a 200 ppm sanitizing solution of sufficient size by thoroughly mixing the product in a ratio of 5 oz. product with 10 gallons of water. Prepare a 600 ppm solution by thoroughly mixing the product in a ratio of 14 oz. product with 10 gallons of water. Use spray or fogging equipment which can resist hypochlorite solutions. Always empty and rinse spray/fog equipment with potable after use. Thoroughly spray or fog all surfaces until wet allowing excess sanitizer to drain. Vacate area for at least 2 hours. Prior to using equipment rinse all surfaces treated with a 600 ppm solution with a 200 ppm solution.

SANITIZATION OF NONPOROUS NON-FOOD CONTACT SURFACES

RINSE METHOD – Prepare a sanitizing solution by thoroughly mixing 5 oz. of this product with 10 gallons of water to provide approximately 200 ppm available chlorine by weight. Clean equipment surfaces in the normal manner. Prior to use, rinse all surfaces thoroughly with the sanitizing solution maintaining contact with the sanitizer for at least 2 minutes. Do not rinse equipment with water after treatment and do not soak equipment overnight.

IMMERSION METHOD – Prepare a sanitizing solution by thoroughly mixing in an immersion tank 5 oz. of this product with 10 gallons of water to provide approximately 200 ppm available chlorine by weight. Clean equipment in the normal manner. Prior to use, immerse equipment in the sanitizing solution for at least 2 minutes and allow the sanitizer to drain. Do not rinse equipment with water after treatment.

SPRAY/FOG METHOD – Pre-clean all surfaces after use. Prepare a 200 ppm available chlorine sanitizing solution of sufficient size by thoroughly mixing the product in a ratio of 5 oz. product with 10 gallons of water. Use spray or fogging equipment which can resist hypochlorite solutions. Prior to using equipment, thoroughly spray or fog all surfaces until wet allowing excess sanitizer to drain. Vacate area for at least 2 hours.

WAREWASHING

FOR SANITIZING TABLEWARE IN LOW TEMPERATURE DISHWASHING MACHINE – Dispense this product into final rinse water at 100 ppm available chlorine. Do not allow concentration to fall below 50 ppm. Air dry. Dispenser must be set to deliver a sanitizing solution of 2 oz. per 10 gallons of water to provide 100 ppm of available chlorine. Only a qualified service representative shall set or adjust dispenser on the machine.

DISINFECTION OF DRINKING WATER (POTABLE)

PUBLIC SYSTEMS – Mix a ratio of 2 oz. of this product to 100 gallons of water. Begin feeding this solution with a hypochlorinator until a free available chlorine residual of at least 0.2 ppm and no more than 0.6 ppm is attained throughout the distribution system. Check water frequently with a chlorine test kit. Bacteriological sampling must be conducted at a frequency no less than that prescribed by the National Primary Drinking Water Regulations. Contact your local Health Department for further details.

INDIVIDUAL SYSTEMS DUG WELLS – Upon completion of the casing (lining), wash the interior of the casing with a 100 ppm available chlorine solution using a stiff brush. This solution can be made by thoroughly mixing 2 oz. of this product into 10 gallons of water. After covering the well, pour the sanitizing solution into the well through both the pipe sleeve opening and the pipeline. Wash the exterior of the pump cylinder also with the sanitizing solution. Start pump and pump water until strong odor of chlorine in water is noted. Stop pump and wait at least 24 hours. After 24 hours, flush well until all traces of chlorine have been removed from the water. Consult your local Health Department for further details.

INDIVIDUAL WATER SYSTEMS DRILLED, DRIVEN, & BORED WELLS – Run pump until water is as free from turbidity as possible. Pour 100 ppm available chlorine sanitizing solution into the well. This solution can be made by thoroughly mixing 2 oz. of this product into 10 gallons of water. Add 5 to 10 gallons of clean chlorinated water to the well in order to force the sanitizer into the rock formation. Wash the exterior of pump cylinder with the sanitizer. Drop pipeline into well, start pump and pump water until strong odor of chlorine in water is noted. Stop pump and wait at least 24 hours. After 24 hours, flush well until all traces of chlorine have been removed from the water. Deep wells with the high water levels necessitate the use of special methods for introduction of the sanitizer into the well. Consult your local Health Department for further details.

INDIVIDUAL WATER SYSTEMS, FLOWING ARTESIAN WELLS - Artesian wells generally do not require disinfection. If analyses indicate persistent contamination, the well must be disinfected. Consult your local Health Department for further details.

EMERGENCY DISINFECTION – When boiling of water for 1 minute is not practical, water can be made potable by using this product. Prior to addition of the sanitizer, remove all suspended material by filtration or by allowing it to settle to the bottom. Decant the clarified contaminated water to a clean container and add 2 drops of this product to 20 gallons of water. Allow the treated water to stand for 30 minutes. Properly treated water must have a slight chlorine odor, if not repeat dosage and allow the water to stand an additional 15 minutes. The treated water can then be made palatable by pouring it between clean containers several times.

PUBLIC WATER SYSTEMS

RESERVOIRS ALGAE CONTROL – Hypochlorinate streams feeding the reservoir. Suitable feeding points must be selected on each stream at least 50 yards upstream from the points of entry into the reservoir.

MAINS – Thoroughly flush section to be sanitized by discharging from hydrants. Permit a water flow of at least 2.5 feet per minute to continue under pressure while injecting this product by means of a hypochlorinator. Stop water flow when a chlorine residual test of 50 ppm is obtained at the low pressure end of the new main section after a 24 hour retention time. When chlorination is completed, the system must be flushed free of all heavily chlorinated water.

NEW TANKS, BASIN, ETC. – Remove all physical soil from surfaces. Place 50 oz. of this product for each 5 cubic feet of working capacity (500 ppm available chlorine). Fill to working capacity and allow to stand for at least 4 hours. Drain and flush with potable water and return to surface.
NEW FILTER SAND – Apply 200 oz. of this product for each 150 to 200 cubic feet of sand. The action of the product dissolving as the water passes through the bed will aid in sanitizing the new sand.
NEW WELLS - Flush the casing with a 50 ppm available chlorine solution of water containing 12 oz. of this product for each 100 gallons of water. The solution must be pumped or fed by gravity into the well after thorough mixing with agitation. The well must stand for several hours or overnight under chlorination. It must then be pumped until representative raw water sample is obtained. Bacterial examination of the water will indicate whether further treatment is necessary.
EXISTING EQUIPMENT – Remove equipment from service thoroughly clean surfaces of all physical soil. Sanitize by placing 50 oz. of this product for each 5 cubic feet capacity, (approximately 500 ppm available chlorine). Fill to working capacity and let stand at least 4 hours. Drain and place in service. If the previous treatment is not practical, surfaces must be sprayed with a solution containing 12 oz. of this product for each 5 gallons of water (approximately 1,000 ppm available chlorine). After drying, flush with water and return to service.

EMERGENCY DISINFECTION AFTER FLOODS

WELLS – Thoroughly flush contaminated casing with a 500 ppm available chlorine solution. Prepare this solution by mixing 12 oz. of this product with 10 gallons of water. Backwash the well to increase yield and reduce turbidity adding sufficient chlorinating solution to the backwash to produce a 10 ppm available chlorine residual as determined by a chlorine test kit. After the turbidity has been reduced and the casing has been treated, add sufficient chlorinating solution to produce 50 ppm available chlorine residual. Agitate the well water for several hours and take a representative water sample. Retreat well if water samples are biologically unacceptable.
RESERVOIRS – In case of contamination by overflowing streams, establish hypochlorinating stations upstream of the reservoir. Chlorinate the inlet water until the entire reservoir obtains 0.2 ppm available chlorine residual as determined by a suitable chlorine test kit. In case of contamination from surface drainage apply sufficient product directly to the reservoir to obtain a 0.2 ppm available chlorine residual in all parts of the reservoir.
BASINS, TANKS, FLUMES, ETC. – Thoroughly clean all equipment, then apply 50 oz. of product per 5 cu.ft. of water to obtain 500 ppm available chlorine as determined by a suitable test kit. After 24 hours drain, flush, and return to service. If the previous method is not suitable, spray or flush, the equipment with a solution containing 12 oz. of this product for each 5 gallons of water (1,000 ppm available chlorine). Allow to stand for 2 to 4 hours, flush and return to service.
FILTERS – When the sand filter needs replacement, apply 200 oz. of this product for each 150 to 200 cubic feet of sand. When the filter is severely contaminated, additional product must be distributed over the surface at the rate of 200 oz. per sq. ft. Water must stand at a depth of 1 foot above the surface of the filter bed for 4 to 24 hours. When filter beds can be backwashed of mud and silt apply 200 oz. of this product per each 50 sq.ft. allowing the water to stand at a depth of 1 foot above the filter sand. After 30 minutes, drain water to the level of the filter. After 4 to 6 hours, drain and proceed with normal back washing.
DISTRIBUTION SYSTEM – Flush repaired or replaced section with water. Establish a hypochlorinating station and apply sufficient product until a consistent available chlorine residual of at least 10 ppm remains after a 24 hour retention time. Use a chlorine test kit.

EMERGENCY DISINFECTION AFTER FIRES

CROSS CONNECTIONS OR EMERGENCY CONNECTIONS – Hypochlorination or gravity feed equipment must be set up near the intake of the untreated water supply. Apply sufficient product to give a chlorine residual of at least 0.1 to 0.2 ppm at the point where the untreated supply enters the regular distribution system. Use a chlorine test kit.

EMERGENCY DISINFECTION AFTER DROUGHTS

SUPPLEMENTARY WATER SUPPLIES – Gravity or mechanical hypochlorite feeders must be set up on a supplementary line to dose the water to a minimum chlorine residual of 0.2 ppm after a 20 minute contact time. Use a chlorine test kit.
WATER SHIPPED IN BY TANKS, TANK CARS, TRUCKS, ETC. – Thoroughly clean all containers and equipment. Spray a 500 ppm available chlorine solution and rinse with potable water after 5 minutes. This solution is made by mixing 12 oz. of this product for each 10 gallons of water. During the filling of the containers dose with sufficient amounts of this product to provide at least a 0.2 ppm chlorine residual. Use a chlorine test kit.

EMERGENCY DISINFECTION AFTER MAIN BREAKS

MAINS – Before assembly of the repaired section, flush out mud and soil. Permit a water flow of at least 2.5 feet per minute to continue under pressure while injecting this product by means of a hypochlorinator. Stop water flow when a chlorine residual test of 50 ppm is obtained at the low pressure end of the new main section after a 24 hour retention time. When chlorination is completed, the system must be flushed free of all heavily chlorinated water.

COOLING TOWER/EVAPORATIVE CONDENSER WATER

SLUG FEED METHOD – ***Initial Dose***- When system is noticeably fouled, apply 110 to 230 oz. of this product per 10,000 gallons of water in the system to obtain from 5 to 10 ppm available chlorine. Repeat until control is achieved.
Subsequent Dose – When microbial control is evident, add 22 oz. of this product per 10,000 gallons of water in the system daily or as needed to maintain control and keep the chlorine residual at 1 ppm. Badly fouled systems must be cleaned before treatment is begun.
INTERMITTENT FEED METHOD- ***Initial Dose-*** When system is noticeably fouled, apply 110 to 230 oz. of this product per 10,000 gallons of water in the system to obtain 5 to 10 ppm available chlorine. Apply half (or 1/3, 1/4, or 1/5) of this initial dose when half (or 1/3, 1/4, or 1/5) of the water in the system has been lost by blowdown.
Subsequent Dose- When microbial control is evident, add 22 oz. of this product per 10,000 gallons of water in the system to obtain a 1 ppm residual. Apply half (or 1/3, 1/4, or 1/5) of this initial dose when half (or 1/3, 1/4, or 1/5) of the water in the system has been lost by blowdown. Badly fouled systems must be cleaned before treatment is begun.
CONTINUOUS FEED METHOD- ***Initial Dose-*** When system is noticeably fouled, apply 110 to 230 oz. of this product per 10,000 gallons of water in the system to obtain 5 to 10 ppm available chlorine.
Subsequent Dose- Maintain this treatment level by starting a continuous feed of 2 oz. of this product per 1,000 gallons of water lost by blowdown to maintain a 1 ppm residual. Badly fouled systems must be cleaned before treatment is begun.
BRIQUETTES OR TABLETS- ***Initial Dose-*** Initially slug dose the system with 110 oz. of this product per 10,000 gallons of water in the system. Badly fouled systems must be cleaned before treatment is begun.
Subsequent Dose- When microbial control is evident, add 22 oz. of this product per 10,000 gallons of water in the system daily, or as needed to maintain control and keep the chlorine residual at 1 ppm. Badly fouled systems must be cleaned before treatment is begun.

SEWAGE AND WASTEWATER EFFLUENT TREATMENT

The disinfection of sewage effluent must be evaluated by determining the total number of coliform bacteria and/or fecal coliform bacteria, as determined by the Most Probable Number (MPN) procedure, of the chlorinated effluent and has been reduced to or below the maximum permitted by the controlling regulatory jurisdiction.
On the average, satisfactory disinfection of secondary wastewater effluent can be obtained when the chlorine residual is 0.5 ppm after 15 minutes contact. Although the chlorine residual is the critical factor in disinfection, the importance of correlating chlorine residual with bacteria kill must be emphasized. The MPN of the effluent, which is directly related to the water quality standards requirements, must be the final and primary standard, and the chlorine residual must be considered an operating standard valid only to the extent verified by the coliform quality of the effluent.
The following are critical factors affecting wastewater disinfection:

1. Mixing- It is imperative that the product and the wastewater be instantaneously and completely flash mixed to assure reaction with every chemically active soluble and particulate component of the wastewater.
2. Contacting- Upon flash mixing, the flow through the system must be maintained.
3. Dosage/Residual Control- Successful disinfection is extremely dependent on response to fluctuating chlorine demand to maintain a predetermined desirable chlorine level. Secondary effluent must contain 0.2 to 1.0 ppm chlorine residual after a 15 to 30 minute contact time. A reasonable average of residual chlorine is 0.5 ppm after 15 minutes contact time.

SEWAGE AND WASTEWATER TREATMENT

EFFLUENT SLIME CONTROL- Apply a 100 to 1,000 ppm available chlorine solution at a location which will allow for complete mixing. Prepare this solution by mixing 22 to 230 oz. of this product with 100 gallons of water. Once control is evident, apply a 15 ppm available chlorine solution. Prepare this solution by mixing 3.5 oz. of this product with 100 gallons of water.
FILTER BEDS SLIME CONTROL- Remove filter from service drain to a depth of 1 ft. above filter sand and add 230 oz. of the product per 20 sq. ft. evenly over the surface. Wait 30 minutes before draining water to a level that is even with the top of the filter. Wait for 4 to 6 hours before completely draining and backwashing filter.

COMMERCIAL LAUNDRY SANITIZERS

Wet fabrics or clothes must be spun dry prior to sanitation. Thoroughly mix 5 oz. of this product with 10 gallons of water to yield 200 ppm available chlorine. Promptly after mixing the sanitizer, add the solution into the prewash prior to washing fabrics/clothes in the regular wash cycle with a good detergent. Test the level of available chlorine if solution has been allowed to stand. Add more of the product if the available chlorine level has dropped below 200 ppm.

PULP AND PAPER MILL PROCESS WATER SYSTEM

SLUG FEED METHOD- ***Initial Dose-*** When system is noticeably fouled, apply 110 to 230 oz. of this product per 10,000 gallons of water in the system to obtain from 5 to 10 ppm available chlorine. Repeat until control is achieved.
Subsequent Dose- When microbial control is evident, add 23 oz. of this product per 10,000 gallons of water in the system daily or as needed to maintain control and keep the chlorine residual at 1 ppm. Badly fouled systems must be cleaned before treatment is begun.
INTERMITTENT FEED METHOD- ***Initial Dose-*** When system is noticeably fouled, apply 110 to 230 oz. of this product per 10,000 gallons of water in the system to obtain 5 to 10 ppm available chlorine. Apply half (or 1/3, 1/4, or 1/5) of this initial dose when half (or 1/3, 1/4, or 1/5) of the water in the system has been lost by blowdown.
Subsequent Dose- When microbial control is evident, add 23 oz. of this product per 10,000 gallons of water in the system to obtain a 1 ppm residual. Apply half (or 1/3, 1/4, or 1/5) of this initial dose when half (or 1/3, 1/4, or 1/5) of the water in the system has been lost by blowdown. Badly fouled systems must be cleaned before treatment is begun.
CONTINUOUS FEED METHOD- ***Initial Dose-*** When system is noticeably fouled, apply 110 to 230 oz. of this product per 10,000 gallons of water in the system to obtain 5 to 10 ppm available chlorine.
Subsequent Dose- Maintain this treatment level by starting a continuous feed of 2 oz. of this product per 1,000 gallons of water lost by blowdown to maintain a 1 ppm residual. Badly fouled systems must be cleaned before treatment is begun.
BRIQUETTES OR TABLETS- ***Initial Dose-*** Initially slug dose the system with 110 oz. of this product per 10,000 gallons of water in the system. Badly fouled systems must be cleaned before treatment is begun.
Subsequent Dose- When microbial control is evident, add 23 oz. of this product per 10,000 gallons of water in the system daily or as needed to maintain control and keep the chlorine residual at 1 ppm. Badly fouled systems must be cleaned before treatment is begun.

AGRICULTURAL USES

POST HARVEST PROTECTION- Potatoes can be sanitized after cleaning and prior to storage by spraying with a sanitizing solution at a level of 1 gallon of sanitizing solution per ton of potatoes. Thoroughly mix 2 oz. of this product to 2 gallons of water to obtain 500 ppm available chlorine.

BEE CELLS & BOARDS- Disinfect leaf cutting bee cells and bee boards by immersion in a solution containing 1 ppm available chlorine for 3 minutes. Allow cells to drain for 2 minutes and dry for 4 to 5 hours or until no chlorine odor can be detected. This solution is made by thoroughly mixing ¼ oz. of this product to 100 gallons of water. The bee domicile is disinfected by spraying with a 0.1 ppm solution until all surfaces are thoroughly wet. Allow the domicile to dry until all chlorine odor has dissipated.
FOOD EGG SANITIZATION- Thoroughly clean all eggs. Thoroughly mix 4.5 oz. of this product with 10 gallons of warm water to produce a 200 ppm available chlorine solution. The sanitizer temperature must not exceed 130° F. Spray the warm sanitizer so that the eggs are thoroughly wetted. Allow the eggs to thoroughly dry before casing or breaking. Do not apply a potable water rinse. The solution must not be reused to sanitize eggs.
FRUIT AND VEGETABLE WASHING- Thoroughly clean all fruits and vegetables in a wash tank. Thoroughly mix 11 oz. of this product in 200 gallons of water to make a sanitizing solution of 25 ppm available chlorine. After draining the tank, submerge fruit or vegetables for 2 minutes in a second wash tank containing the recirculating sanitizing solution. Spray rinse vegetables with the sanitizing solution prior to packaging. Rinse fruit with potable water only prior to packaging.
CONTROL OF FRUIT & VEGETABLE DECAY- Use this product to control organisms causing decay of fruits and vegetables after harvest. Prior to use, all fruits and vegetables must be thoroughly washed using an appropriate cleaning solution. Remove all soils and other residues prior to treating with this product. After washing, transfer the fruits and vegetables to a separate tank containing the treatment solution.
Apply at the concentration of available chlorine for various fruits and vegetables as listed in the table above. To obtain a 100 ppm solution of available chlorine, add 45 fl. oz. of this product to 200 gallons of water. Maintain the pH of the solution between 6.0 and 8.0 with a dilute solution of hydrochloric acid or other approved buffer. For other ppm concentrations, use appropriate dilutions. Rinse with potable water after treatment except as specified in the table.
For citrus canker quarantine, use at 200 ppm at pH 6.0 to 7.5. Apply for 2 minutes using a suitable spray or dip tank treatment.
RICE SEED TREATMENT- To aid in surface sterilization of rice seed for prevention of bakanae disease Fusarium fukikuroi [syn F moniliforme] or Gibberella fujikuroi, mix 5.5 gallons of this product per 100 gallons of water to make a 3,000 ppm available chlorine solution. Mix solution thoroughly, then apply to seeds. Soak the seeds for 2 hours, then drain solution and replace with fresh water. Continue seed soaking and draining as usual. Do not apply undiluted product directly to seed.
Alternatively, make a 1,500 ppm available chlorine solution by mixing 2 ¾ gallons of this product with 100 gallons of water. Mix solution thoroughly, then apply seeds. Soak and drain seeds as usual. No rinsing is required. Do not apply undiluted product directly to seed.
Prepare a fresh solution for each batch of seed. Do not use treated seeds for food or feed.
MEAT & POULTRY PLANTS- This product must be used in processing water of meat and poultry plants at concentrations of up to 5 ppm calculated as available chlorine. Chlorine must be present in poultry chiller intake water and in carcass wash water at concentrations up to 50 ppm calculated as available chlorine. Use a suitable test kit to adjust to desired available chlorine level. Chlorine must be dispensed at a constant and uniform level and the method or system must be such that a controlled rate is maintained. Thoroughly mix 2 oz. of this product to 200 gallons of water to obtain 5 ppm available chlorine or 23 oz. to 200 gallons of water for 50 ppm available chlorine.

AQUACULTURAL USES

FISH PONDS- Remove fish from ponds prior to treatment. Thoroughly mix 230 oz. of this product to 10,000 gallons of water to obtain 10 ppm available chlorine. Add more product to the water if the available chlorine level is below 1 ppm after 5 minutes. Return fish to pond after the available chlorine level reaches zero.
FISH POND EQUIPMENT- Thoroughly clean all equipment prior to treatment. Thoroughly mix 4.5 oz. of this product to 10 gallons of water to obtain 200 ppm available chlorine. Porous equipment must soak for one hour.
MAINE LOBSTER PONDS- Remove lobsters, seaweed, etc. from ponds prior to treatment. Drain the pond. Thoroughly mix 110 gallons of this product to 10,000 gallons of water to obtain at least 600 ppm available chlorine. Apply so that all barrows, gates, rock, and dam are treated with product. Permit high tide to fill the pond and then close the gates. Allow water to stand for 2 to 3 days until the available chlorine level reaches zero. Open gates and allow 2 tidal cycles to flush the pond before returning lobsters to pond. (**NOT FOR USE IN CALIFORNIA**.)
CONDITIONING LIVE OYSTERS- Thoroughly mix 11 oz. of this product to 10,000 gallons of water at 50°F to 70° F to obtain 0.5 ppm available chlorine. Expose oysters to the solution for at least 15 minutes monitoring the available chlorine level so that it does not fall below 0.05 ppm. Repeat entire process if the available chlorine level drops below 0.05 ppm or the temperature falls below 50° F. (**NOT FOR USE IN CALIFORNIA**.)
CONTROL OF SCAVENGERS IN FISH HATCHERY PONDS- Prepare a solution containing 200 ppm of available chlorine by mixing 4.5 oz. of product with 10 gallons of water. Pour into drained pond potholes. Repeat if necessary. Do not put desired fish back into refilled ponds until chlorine residual has dropped to 0 ppm as determined by a test kit.

SANITIZATION OF DIALYSIS MACHINES

Flush equipment thoroughly with water prior to using this product. Thoroughly mix 14 oz. of this product to 10 gallons of water to obtain at least 600 ppm available chlorine. Immediately use this product in the hemodialysate system allowing for a minimum contact time of 15 minutes at 20˚C. Drain system of the sanitizing solution and thoroughly rinse with water. Discard and **DO NOT** reuse the spent sanitizer. Rinsate must be monitored with a suitable test kit to ensure that no available chlorine remains in the system.
This product is for decontaminating single and multi-patient hemodialysate systems. This product has been shown to be an effective disinfectant (virucide, fungicide, bactericide, pseudomonicide) when tested by AOAC and EPA test methods. This product may not totally eliminate all vegetative microorganisms in hemodialysate delivery systems due to their construction and/or assembly, but can be relied upon to reduce the number of microorganisms to acceptable levels when used as directed. This product must be used in a disinfectant program which includes bacteriological monitoring of the hemodialysate delivery system. This product is NOT recommended for use in hemodialysate or reverse osmosis (RO) membranes.
Consult the guidelines for hemodialysate systems which are available from the Hepatitis Laboratories CDC, Phoenix, AZ 85021.

DRIP IRRIGATION

This product, when used properly, will control bacterial and algae growth in the lines and emitters of a drip irrigation system and thereby provide a uniform distribution of water.
CALIBRATION- If the irrigation water has high levels of nutrients causing bacterial algae and other biofouling that reduces system performance, continuous chlorination must be necessary. The level of free residual chlorine for continuous feed is 1 to 2 ppm measured at the end of the farthest lateral using a good quality test kit for available chlorine. The available chlorine level must be checked periodically.
SHOCK TREATMENTS- Periodic shock treatments at higher available chlorine rate of up to 20 ppm free residual must be appropriate where bacteria and/or algae clogging and build up are not managed by maintaining a continuous residual. The frequency of the chlorine shock application depends upon the frequency and extent of bio clogging.
INJECTION- The rate of sanitizer injection into the irrigation water flow required to supply the desired available chlorine dosage in ppm can be estimated using the following equation:
I = (0.006) x (ppm desired) x (system flow rate in gpm) / (bleach strength)

Where I is the injection rate in gallons per hour.
For example: To obtain 5 ppm available chlorine at a water flow rate of 30 gallons per minute while injecting 5.25% sodium hypochlorite solution, you must inject:

I = (0.006) x (5) x (30) / 5.25 = 0.17 gallons per hour of 5.25% sodium hypochlorite solution.

NOTE: This calculation, when applied to clean water which is free of amine nitrogen and organic nutrients, will give a result close to the actual product injection rate required. In actual practice, however, contaminants in the water must consume sanitizer such that the available chlorine concentration is less than expected from the calculation. To correctly establish the product dose setting required, it is necessary to measure the available chlorine at the end of the treated increment in the field and adjust the sanitizer dose setting until the desired available chlorine concentration is obtained. Only experience can establish the actual injector settings required to provide the desired level of available chlorine at the end of the farthest lateral.
Injection must be started during irrigation near the end of the irrigation sequence, but early enough to establish the desired available chlorine concentration throughout the system being treated. Apply the sanitizer upstream of the filter to help keep the filter clean. Determine the level of available chlorine, as described in the Calibration section above, using a chlorine test kit. Allow sufficient time to achieve a steady reading.
DO NOT apply sanitizer when fertilizers, herbicides, and insecticides are being injected, since they will consume the available chlorine and could produce toxic reaction products.
SENSITIVE PLANT SPECIES PRECAUTIONS- Certain plants, including various species of trees, flowers, shrubs, agronomic crops, fruits, and vegetables, are adversely affected by chlorinated irrigation. The use of this product can impact growth, appearance, and health of the plants.
Begonias geraniums and other ornamental plant species are known to be sensitive to continuous chlorination at levels of 1-2 ppm free chlorine. Plant species such as tomato, lettuce, broccoli, and petunia are sensitive to periodic chlorination levels of 10-20 ppm free chlorine.
If uncertain of a plant's tolerance, consult an agronomist or a support agency, such as University Extension Service, or your local agent of the U.S. Department of Agriculture.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage disposal or cleaning of equipment. 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 must be diluted with water before disposal in a sanitary sewer. 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 the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure 2 more times.

Manufactured by:
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