

U.S. ENVIRONMENTAL PROTECTION AGENCY  
OFFICE OF PESTICIDES PROGRAMS  
REGISTRATION DIVISION (7505C)  
WASHINGTON, DC 20460

EPA REGISTRATION NO.

49927-4

SEP 13 1994

FORM OF ISSUANCE

NOTICE OF PESTICIDE REGISTRATION  
 Reregistration

(Under the Federal Insecticide, Fungicide,  
and Rodenticide Act, as amended)

NAME OF PESTICIDE PRODUCT

Sodium hypochlorite Solution

NAME AND ADDRESS OF REGISTRANT (Include ZIP code)

Water Guard, Inc.  
P. O. Box 2226  
Wilson, NC 27894

NOTE: Changes in labeling formula differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above U.S. EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby Registered/Reregistered under the Federal Insecticide, Fungicide, and Rodenticide Act.

A copy of the labeling accepted in connection with this Registration/Reregistration is returned herewith.

Registration is in no way to be construed as an indorsement or approval of this product by this Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

Based on your response to the Reregistration Eligibility Document, EPA has reregistered the product listed above. Enclosed is a copy of your label stamped "Accepted". This action is taken under the authority of section 4(g)(2)(C) of the Federal Insecticide, Fungicide, and Rodenticide Act, as amended. Reregistration under this section does not eliminate the need for continual reassessment of pesticides. EPA may require submission of data at any time to maintain the registration of your product.

A stamped copy of the product label is enclosed for your records.

Submit one copy of the final printed label before releasing the product for shipment with the revised labeling.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

Ruth G. Douglas  
Product Manager (32)  
Antimicrobial Program Branch  
Registration Division (7505C)

ATTACHMENT IS APPLICABLE

SIGNATURE OF APPROVING OFFICIAL

DATE



# SODIUM HYPOCHLORITE SOLUTION

WATER GUARD, INC. • P.O. Box 2226 • Wilson, NC 27894 • (919) 237-5205

## KEEP OUT OF REACH OF CHILDREN

### PRECAUTIONARY STATEMENTS

#### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**DANGER:** Corrosive, may cause severe eye 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 authority. 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 direction. 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

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 residues that cannot be used should be diluted with water before disposal in a sanitary sewer. Do not reuse empty container, but triple rinse with water and return to supplier with all plugs and caps intact for deposit refund. Do not contaminate food or feed by storage, disposal or cleaning of equipment.

**STORE IN A COOL DRY PLACE, OUT OF SUN AND AWAY FROM SOURCES OF HEAT AND LIGHT.** Degrades with age. Use a test kit and increase dosage as necessary to obtain required level of available chlorine.

**EMPTY CONTAINERS.** Flush out with water. With all plugs and caps intact, return to supplier for deposit refund. For gallon jugs, flush with water and dispose through recycling center or landfill.

WATERGUARD SODIUM HYPO

ACTIVE INGREDIENT, Sodium Hypochlorite 12.5%  
INERT INGREDIENT 87.5%

100.0%

**DISINFECTANT BACTERICIDE DEODORANT**  
For use in food processing plants, farms, restaurants, hotels, swimming pools, and in industrial applications as a bleach. See directions.

## KEEP OUT OF REACH OF CHILDREN DANGER

### STATEMENT OF PRACTICAL TREATMENT (FIRST AID)

**IF CONTACT WITH EYES OCCURS,** flush with water for at least 15 minutes. Get prompt medical attention.

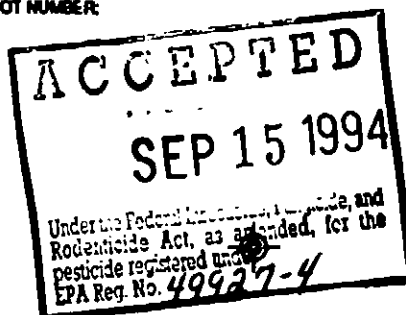
**IF CONTACT WITH SKIN OCCURS,** wash with plenty of soap and water.  
**IF SWALLOWED,** drink large amounts of water. Do not induce vomiting. Call a physician or poison control center immediately.

EPA Reg. No. 49827-4

Est. No. 49827-NC-01

NET CONTENTS:

LOT NUMBER:



## KEEP OUT OF REACH OF CHILDREN MAY BE HARMFUL IF SWALLOWED

**DIRECTIONS FOR USE:**  
It's a violation of Federal law to use this product in a manner inconsistent with its labeling.

### WATER CHLORINATION

1. Sodium Hypochlorite Solution may be used to disinfect water at an initial rate of 1.2 ounces per 100 gallons of water. Run the solution feeder and determine the available chlorine level 30 minutes after treatment. Using a test kit, determine the available chlorine. Under reliable control, increase treatment as necessary to establish an available chlorine of at least 2 ppm. An available chlorine of at least 2 ppm, indicates an effective dosage.
2. Meat Plant Process Water Chlorination: Chlorinate process water of meat plants at concentration of available chlorine. Under reliable control, increase to 200 ppm in water used on carcasses. The treated carcasses must be exposed to air and moisture before further processing.
3. Poultry Plant Process Water Chlorination: Chlorinate process water of poultry plants at levels of available chlorine. Do not rinse with water after treatment. Do not subject to the self-heating factors of oil and the plant personnel. Plant management must be notified when the chlorine level is low. Chlorine must be dispensed at a constant rate. The method or system must be such that a constant level of available chlorine is maintained.

### DEODORIZING AND SANITIZING FOR RESTAURANTS, FARMS AND FOOD PROCESSING

Clean equipment in the normal manner. Just before use, thoroughly wash with this sodium hypochlorite solution. Maintain contact with disinfectant for 15 minutes. Do not rinse with water after treatment. Do not soak overnight. Addition of sodium hypochlorite solution per 5 gallons of water yields 200 ppm available chlorine by weight. Use with age. Use a chlorine test kit and increase dose to the required level of available chlorine.

### COMMERCIAL LAUNDRY

Mix 1 gallon to 14 gallons of water. Introduce to normal laundry process.

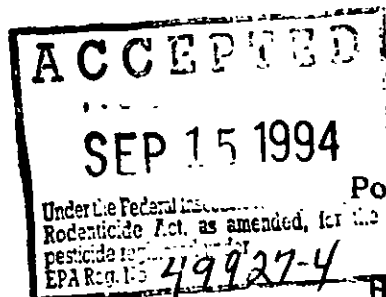
### SWIMMING POOL

For initial dosage of swimming pool water, use 1.2 oz. solution per 1,000 gal. of water. Bathing: Do not allow residual fall below 3 ppm. Use one gallon of 5 gal. 10,000 gallons of water twice a week to provide a Chlorine level of 3 ppm. Use a reliable Chlorine test kit to maintain the Chlorine level at 1 ppm, at all times. The pH should be kept between 7.2 and 7.8.

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BEST AVAILABLE

Contact with  
Eyes: Flush with water for at least 15 minutes. Get prompt medical attention.  
Skin: Wash with plenty of soap and water.  
If Swallowed: Drink large quantities of water. DO NOT induce vomiting. Call a physician or poison control center immediately.



Distributed by

WATER GUARD, INC.

Post Office Box 2226, Wilson, N.C. 27894

#### PRECAUTIONARY STATEMENTS

##### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**DANGER:** Corrosive, may cause severe skin and eye 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, 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 into sewer systems without previously notifying the sewage treatment plant authority. For guidance, contact the State Water Control 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.

##### DIRECTIONS FOR USE

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

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

##### STORAGE AND DISPOSAL

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 but place in trash collection or triple rinse with water and return to supplier with all plugs and caps intact for deposit refund. Do not contaminate food or feed by storage, disposal or cleaning of equipment.

1.

**BEST AVAILABLE COPY**

For a new pool or spring start-up, superchlorinate with 52 to 104 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 a test kit. Adjust and maintain pool water pH to between 7.2 to 7.6. Adjust and maintain alkalinity of the pool to between 50 to 100 ppm. To maintain the pool, add manually or by a feeder device 25 oz. of this product for each 10,000 gallons of water to yield available chlorine residual between 1.0 to 3.0 ppm by weight. Test pH, available chlorine residual and alkalinity of the water frequently with appropriate test kits. Frequency of water treatment will depend upon temperature and number of swimmers. Every 7 days or as necessary, superchlorinate the pool with 85 oz. of product for each 10,000 gallons of water to yield 10 ppm available chlorine by weight. Check the level of available chlorine with a test kit. Do not re-enter pool until the chlorine residual is between 1.0 to 3.0 ppm. At the end of the swimming pool season or when water is to be drained from the pool, chlorine must be allowed to dissipate from treated pool water before discharge. Do not chlorinate pool within 24 hours prior to discharge.

**WINTERIZING POOLS:** While water is still clear and clean, apply 17 oz. of product per 1000 gallons, while filter is running, to obtain a 200 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 5 oz of product per 1000 gallons of water to obtain a free available chlorine concentration of 5 ppm, as determined by a suitable chlorine test kit. Adjust and maintain pool water pH to between 7.2 and 7.8. Some oils, lotions, fragrances, cleaners, etc. may cause foaming or cloudy water as well as reduce the efficiency of the product. To maintain the water, apply 5 oz. of product per 1000 gallons of water over the surface to maintain a chlorine concentration of 5 ppm. After each use, shock treat with 8 oz. of this product per 500 gallons of water to control odor and algae. During extended periods of disuse, add 3 oz. of product daily per 1000 gallons of water to maintain a 3 ppm chlorine concentration.

#### SANITIZATION OF NONPOROUS FOOD CONTACT SURFACES

**RINSE METHOD:** A solution of 100 ppm available chlorine may be used in the sanitizing solution if a chlorine test kit is available. Solutions containing an initial concentration of 100 ppm available chlorine must be tested and adjusted periodically to insure that the available chlorine does not drop below 50 ppm. Prepare a 100 ppm sanitizing solution by thoroughly mixing 1 oz. of this product with 10 gallons of water. If no test kit is available, prepare a sanitizing solution by thoroughly mixing 2 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. If solution contains less than 50 ppm available chlorine, as determined by a suitable test kit, either discard the solution or add sufficient product to re-establish a 200 ppm residual. Do not rinse equipment with water after treatment and do not soak equipment overnight. Sanitizers used in automated systems may be used for general cleaning but may not be re-used for sanitizing purposes.

**IMMERSION METHOD:** A solution of 100 ppm available chlorine may be used in the sanitizing solution if a chlorine test kit is available. Solutions containing an initial concentration of 100 ppm available chlorine must be tested and adjusted periodically to insure that the available chlorine does not drop below 50 ppm. Prepare a 100 ppm sanitizing solution by thoroughly mixing 1 oz. of this product with 10 gallons of water. If no test kit is available, prepare a sanitizing solution by thoroughly mixing 2 oz. of this product with 10 gallons of water to provide approximately 200 ppm available chlorine by weight.

sanitizing solution for at least 2 minutes and allow the sanitizer to drain. If solution contains less than 50 ppm available chlorine, as determined by a test kit, either discard the solution or add sufficient product to re-establish a 200 ppm residual. Do not rinse equipment with water after treatment. Sanitizers used in automated systems may be used for general cleaning but may not be re-used for sanitizing purposes.

**FLOW/PRESSURE METHOD:** Disassemble equipment and thoroughly clean after use. Assemble equipment in operating position prior to use. Prepare a volume of a 200 ppm available chlorine sanitizing solution equal to 110% of volume capacity of the equipment by mixing the product in a ratio of 2 oz. of product with 10 gallons of water. Pump solution through the system until full flow is obtained at all extremities, the system is completely filled with the sanitizer and all air is removed from the system. Close drain valves and hold under pressure for at least 2 minutes to insure contact with all internal surfaces. Remove some cleaning solution from drain valve and test with a chlorine test kit. Repeat entire cleaning/sanitizing process if effluent contains less than 50 ppm available chlorine.

**CLEAN-IN-PLACE METHOD:** Thoroughly clean equipment after use. Prepare a volume of a 200 ppm available chlorine sanitizing solution equal to 110% of volume capacity of the equipment by mixing the product in a ratio of 2 oz. of product with 10 gallons of water. Pump solution through the system until full flow is obtained at all extremities, the system is completely filled with the sanitizer and all air is removed from the system. Close drain valves and hold under pressure for at least 10 minutes to insure contact with all internal surfaces. Remove some cleaning solution from drain valve and test with a chlorine test kit. Repeat entire cleaning/sanitizing process if effluent contains less than 50 ppm available chlorine.

**SPRAY/FOG METHOD:** Preclean 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 2 oz. product with 10 gallons of water. Prepare a 600 ppm solution by thoroughly mixing the product in a ratio of 6 oz. of this 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 treated with 600 ppm solution with a 200 ppm solution.

#### SANITIZATION OF POROUS FOOD CONTACT SURFACES

**RINSE METHOD:** Prepare a sanitizing solution by thoroughly mixing 6 oz. of this product with 10 gallons of water to provide approximately 600 ppm available chlorine by weight. Clean 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. Rinse all surfaces with a 200 ppm chlorine solution. (200 ppm = 2 oz. of product in 10 gallons water)

**IMMERSION METHOD:** Prepare a sanitizing solution by thoroughly mixing, in an immersion tank, 6 oz. of this product with 10 gallons of water to provide approximately 600 ppm available chlorine by weight. Clean equipment in the normal manner. Prior to use, immerse the equipment in the sanitizing solution for at least 2 minutes and allow the sanitizer to drain. Immerse the equipment in a 200 ppm solution of chlorine. (200 ppm = 2 oz. of product in 10 gallons of water.)

**SPRAY/FOG METHOD:** Preclean all surfaces after use. Prepare a 600 ppm available chlorine sanitizing solution of sufficient size by thoroughly mixing the product in a ratio of 6 oz. product with 10 gallons of water. Use spray or fogging 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 2 oz. of this product with 10 gallons of water.

**RINSE METHOD:** Prepare a sanitizing solution by thoroughly mixing 2 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, 2 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 the equipment in the sanitizing solution for at least 2 minutes and allow sanitizer to drain. Do not rinse equipment with water after treatment.

**SPRAY/FOG METHOD:** Preclean all surfaces after use. Prepare a 200 ppm available chlorine solution of sufficient size by thoroughly mixing the product in a ratio of 2 oz. of 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.

#### DISINFECTION OF NONPOROUS NON-FOOD CONTACT SURFACES

**RINSE METHOD:** Prepare a disinfecting solution by thoroughly mixing 6 oz. of this product with 10 gallons of water to provide approximately 600 ppm available chlorine by weight. Clean equipment surfaces in the normal manner. Prior to use, rinse all surfaces thoroughly with the disinfecting solution, maintaining contact with the solution for at least 10 minutes. Do not rinse equipment with water after treatment and do not soak equipment overnight.

**IMMERSION METHOD:** Prepare a disinfecting solution by thoroughly mixing, in an immersion tank, 6 oz. of product with 10 gallons of water to provide approximately 600 ppm available chlorine by weight. Clean equipment in the normal manner. Prior to use, immerse equipment in the disinfecting solution for at least 10 minutes and allow the sanitizer to drain. Do not rinse equipment with water after treatment.

#### SANITIZATION OF POROUS NON-FOOD CONTACT SURFACES

**RINSE METHOD:** Prepare a sanitizing solution by thoroughly mixing, in an immersion tank, 6 oz. of this product with 10 gallons of water to provide approximately 600 ppm available chlorine by weight. Clean 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, 6 oz. of this product with 10 gallons of water to provide approximately 600 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 sanitizer to drain. Do not rinse equipment with water after treatment.

**SPRAY/FOG METHOD:** After cleaning, sanitize non-food contact surfaces with 600 ppm available chlorine by thoroughly mixing the product in a ratio of 6 oz. of this 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. Prior to using equipment, thoroughly spray or fog all surfaces until wet, allowing excess sanitizer to drain. Vacate area for at least 2 hours.

#### SEWAGE & WASTEWATER EFFLUENT TREATMENT

The disinfection of sewage effluent must be evaluated by determining the total number of coliform bacteria, as determined by the Most Probable Number (MPN) procedure, of the chlorinated effluent has been reduced to or below the maximum permitted by the controlling regulatory jurisdiction.

of the average, satisfactory, disinfection of wastewater effluent can be obtained when the chlorine residual is the critical factor in disinfection, the importance of correlating chlorine residual with bacterial kill must be emphasized. The MPN of the effluent, which is directly related to the water quality requirements, should be the final and primary standard and the chlorine residual should 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 should 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 1000 ppm available chlorine solution at a location which will allow complete mixing. Prepare this solution by mixing 10 to 100 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 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 80 oz. of 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 4 to 6 hours before completely draining and backwashing filter.

#### DISINFECTION OF DRINKING WATER

(EMERGENCY/PUBLIC/INDIVIDUAL SYSTEMS)

**PUBLIC SYSTEMS:** Mix a ratio of 1 oz. of this product to 100 gallons of water. Begin feeding this solution with a hypochlorinator until a free available 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 Interim 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 (lining) with a 100 ppm available chlorine solution using a stiff brush. This solution can be made by thoroughly mixing 1 oz. of this product with 10 gallons of water. After covering the well, pour sanitizing solution into the well through both the pipesleeve 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 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 WELL:** Run pump until water is as free from turbidity as possible. Pour a 100 ppm available chlorine sanitizing solution into the well. This solution can be made by thoroughly mixing 1 oz. of this product with 10 gallons of water. Add 5 to 10 gallons of clean, chlorinated water into the well in order to force the sanitizer into the rock formation. Wash the exterior of the 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 high water levels may necessitate the use of special methods for introduction of the sanitizer into the well. Consult your local Health Department for further details.

**RESERVOIRS-ALGAE CONTROL** ) Hypochlorite streams feeding the reservoir. 5711  
 Suitable feeding points should 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 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, BASINS, ETC.:** Remove all physical soil from surfaces. Place 20 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 80 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 5 oz. of this product for each 100 gallons of water. The solution should be pumped or fed by gravity into the well after thorough mixing with agitation. The well should stand for several hours or overnight under chlorination. It may then be pumped until a 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 21 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 may be sprayed with a solution containing 5 oz. of this product for each 5 gallons of water (approximately 1000 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 5 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 a 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 inlet water until the entire reservoir obtains a 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 reservoir.

**BASINS, TANKS, FLUMES, ETC.:** Thoroughly clean all equipment, then apply 20 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 5 oz. of this product for each 5 gallons of water (1000 ppm available chlorine). Allow to stand for 2 to 4 hours, flush and return to service.

**FILTERS:** When the sand filter needs replacement, apply 80 oz. of this product for each 150 to 200 cubic feet of sand. When the filter is severely contaminated, additional product should be distributed over the surface at the rate of 80 oz. per 20 sq. ft. Water should 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 80 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 backwashing.

**DISTRIBUTION SYSTEM:** Flush repaired or replaced section with water. Establish a hypochlorinating station and apply sufficient product until a consistent available chlorine of at least 10 ppm remains after a 24 hour retention time. 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 52 to 104 oz. of this product per 10,000 gallons of water in the system to obtain 5 to 10 ppm available chlorine. Repeat until control is achieved.

Subsequent dose: When microbial control is evident, add 11 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 52 to 104 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 11 oz. of this product per 10,000 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:** Initially slug dose the system with 52 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 11 oz. of this product per 10,000 gallons of water in the system daily, or as needed to maintain control and keep chlorine residual at 1 ppm. Badly fouled systems must be cleaned before treatment is begun.

#### LAUNDRY SANITIZERS

##### HOUSEHOLD LAUNDRY SANITIZERS

**IN SOAKING SUDS:** Thoroughly mix 2 oz. of this product to 10 gallons of wash water to provide 200 ppm available chlorine. Wait 5 minutes, then add soap or detergent. Immerse laundry for at least 11 minutes prior to starting the wash/rinse cycle.

**IN WASHING SUDS:** Thoroughly mix 2 oz. of this product to 10 gallons of wash water containing clothes to provide 200 ppm available chlorine. Wait 5 minutes, then add soap or detergent and start wash/rinse cycle.

##### COMMERCIAL LAUNDRY SANITIZERS

Wet fabrics or clothes should be spun dry prior to sanitization. Thoroughly mix 2 oz. of this product to 10 gallons of water to yield 200 ppm available chlorine. Promptly after mixing the sanitizer, add 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 product if the available chlorine level has dropped below 200 ppm.

##### FARM PREMISES

Remove all animals, poultry and feed from premises, vehicles and enclosures.

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Remove all litter and manure from floors, walls, and surfaces of barns, pens, stalls, chutes and other facilities occupied or transversed by animals or poultry. Empty all troughs, racks and other feeding and watering appliances. Thoroughly clean all surfaces with soap or detergent and rinse with water. To disinfect, saturate all surfaces with a solution of at least 1000 ppm available chlorine for a period of 10 minutes. A 1000 ppm solution can be made by thoroughly mixing 11 oz. of this product with 10 gallons of water. Immerse all halters, ropes and other types of equipment used in handling and restraining animals or poultry, as well as the cleaned forks, shovels and scrapers used for removing litter and manure. Ventilate buildings, cars, boats and other closed spaces. Do not house livestock or poultry or employ equipment until chlorine has been dissipated. All treated feed racks, mangers, troughs, automatic feeders, fountains and waterers must be rinsed with potable water before reuse.

#### PULP AND PAPER MILL PROCESS WATER SYSTEMS

**SLUG FEED METHOD:** Initial dose: When system is noticeable fouled, apply 52 to 104 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 11 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 52 to 104 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 11 oz. of per 10,000 gallons of water 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 noticeable fouled, apply 52 or 104 ozs. 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 1 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:** Initially slug dose the system with 52 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 11 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 1 oz. of this product with 2 gallons of water to obtain 500 ppm available chlorine.

**LEAFCUTTING BEE CELLS & BEE BOARDS:** Disinfect leafcutting 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 1 Tsp. 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 2 oz. of this product with 10 gallons of warm water to produce a 200 ppm available

chlorine solution. The sanitizer temperature should 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 should not be re-used to sanitize eggs. // 11

**FRUIT & VEGETABLE WASHING:** Thoroughly clean all fruits and vegetables in a wash tank. Thoroughly mix 5 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.

#### AQUACULTURAL USES

**FISH PONDS:** Remove fish from ponds prior to treatment. Thoroughly mix 103 oz. of the 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 2 oz. of this product to 10 gallons of water to obtain 200 ppm available chlorine. Porous equipment should soak for one hour.

**CONTROL OF SCAVENGERS IN FISH HATCHERY PONDS:** Prepare a solution containing 200 ppm of available chlorine by mixing 2 oz. of this products with 10 gallons of water. Pour into drained pond potholes. Repeat if necessary. Do not put desirable fish back into refilled ponds until chlorine residual has dropped to zero ppm, as determine by a test kit.

#### ASPHALT OR WOOD ROOFS AND SIDINGS

To control fungus and mildew, first remove all physical soil by brushing and hosing with clean water, and apply a 5000 ppm available chlorine solution. Mix 5 oz. of this product per gallon of water and brush or spray roof or siding. After 30 minutes, rinse by hosing with clean water.