

1258-1217

2-1-2008

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Washington, D.C. 20460

February 1, 2008

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

Mark E. Burt
Regulatory Manager
Arch Chemicals, Inc.
1955 Lake Park Drive
Suite 100
Smyrna, GA 30080

Subject: HTH Dry Chlorinator 20 Gram Tablets
EPA Registration No. 1258-1217
Application Date: January 31, 2008
Receipt Date: January 31, 2008

Dear Mr. Burt:

The following amendments, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, are acceptable with the comment below:

- Addition of optional marketing statements
- Addition of optional advisory statements
- Revisions to comply with Container Regulations in subpart H Container Labeling §156.140
- Addition of "responsible care" symbol as advisory statement

Comments

On page 1, revise the statement "Do not mix this product with a small amount of" to read "Do not mix this product with a small amount of water."

General Comments

A stamped copy of the labeling, accepted with comment, is enclosed. Submit 1 copy of your final printed label before distributing or selling the product bearing the revised labeling.

Should you have any questions or comments concerning this letter, please contact Wanda Henson at 703-308-6345.

Sincerely,

Emily H. Mitchell
Product Manager (32)
Regulatory Management Branch II
Antimicrobials Division (7510P)

CONCURRENCES							
YMBOL	7510P	7510P					
JRNAME	Wanda Henson	Henson					
ATE	2/1/08	2/1/08					

DRAFT EPA MASTER LABEL COPY

[All text in square brackets [AAA] is optional and may/may not be included on final label]
[All text in braces {AAA} is for information purposes and will not appear on final label]

{Front panel}

PENDING

HTH® DRY CHLORINATOR 20 GRAM TABLETS

ACTIVE INGREDIENT:
CALCIUM HYPOCHLORITE.....68%
OTHER INGREDIENTS:.....32%
TOTAL.....100%

MINIMUM AVAILABLE CHLORINE...65%

KEEP OUT OF REACH OF CHILDREN

DANGER

Contamination or improper use may cause intense fire, explosion, or the release of toxic gases. Do not allow product to contact any foreign matter, including other water treatment products. **If product is exposed to small amounts of water, it can react violently to produce heat and toxic gases and spatter.** {Optional – for use on residential use swimming pool products} [Do not mix this product with a small amount of. Only add directly to your pool or spa.] **Do not add water to this product. Add only into water.** {Optional – for use on residential use swimming pool and spa products} [Do not remove floater or other dispensing device from water for more than five minutes if it contains tablets or tablet residue.] **Highly corrosive. Causes skin and eye damage. May be fatal if swallowed.**

Read all precautionary statements on label and first aid statements before use.

NET WT. XXXX LB.

EPA REG. NO. 1258-1217
EPA EST. NO. XXXXXX

ARCH CHEMICALS, INC.
1955 Lake Park Drive
Smyrna, GA 30080

[HTH®], [Sock It®], [Super Sock It®] and [pH Plus®] [Pulsar®], [DryTec®], [ConstantChlor®], [CCH®] (brand name) are registered trademarks of Arch Chemicals, Inc.

FIRST AID: {Format consistent with PR Notice 2001-1}

IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment 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 treatment advice.

IF SWALLOWED: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a 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. Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

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

IN CASE OF EMERGENCY CALL: 1-800-654-6911.

ACCEPTED
with COMMENTS
EPA Letter Dated:

FEB 1 - 2008

Under the Federal Insecticide,
Fungicide, and Rodenticide Act as
amended, for the pesticide,
registered under EPA Reg. No. 1258-1217

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{MARKETING CLAIMS}

{Statements available to all labels}

{Kills Bacteria}

{Controls Algae}

{Destroys Organic Contaminants}

{Step 1}

{Optional statement for inclusion on dealer direct brands}

[Step 1. Sanitize

Step 2. Shock

Step 3. Add Algacide]

[Maintain] {Optional statement for use on labels with spa directions for use, referring to the spa product guide, below}

{back or side panels}

PRECAUTIONARY STATEMENTS**HAZARDS TO HUMANS AND DOMESTIC ANIMALS****DANGER: Highly corrosive. Causes skin and eye damage. May be fatal if swallowed. Irritating to nose and throat.**

- Open in a well ventilated area. Avoid breathing dust and fumes.
- Do not get in eyes, on skin, or on clothing. Do not handle with bare hands. Wear goggles and use rubber gloves. For additional protection of skin, wear long sleeves and long pants.
- Remove and wash contaminated clothing before reuse.
- Only use utensils that are thoroughly clean and dry.

PHYSICAL and CHEMICAL HAZARDS:

If product is exposed to small amounts of water, it can react violently to produce heat and toxic gases and spatter. Do not add water to this product. Add only into water.

- Do not allow to become wet or damp before use.

Can react with other materials, including other water treatment products, to cause intense fire, explosion, and the release of toxic gases.

- Keep all foreign matter, including other water treatment products, away from this product.
- Do not use this product in a floater or feeder that has been used with any other product.
- Do not allow this product to contact other water treatment products. If used with a skimmer, make sure skimmer is completely clean and free of residue from other water treatment products before putting this product in a skimmer.

Exposure to heat can cause this product to rapidly decompose, leading to intense fire, explosion, and the release of toxic gases.

- Store in a cool, dry, well ventilated area.

Strong oxidizing agent. This product can increase fire intensity. Keep away from heat and from flame and burning material (like a lighted cigarette).

{Environmental hazards statement for end-use products in containers less than 5 gallons (liquid) or less than 50 pounds (solid, dry weight)}

ENVIRONMENTAL HAZARDS: This pesticide is toxic to fish and aquatic organisms.

{Environmental hazards statement for end-use products in containers \geq 5 gallons (liquid) or \geq 50 pounds (solid, dry weight) or all container sizes of technical grade or manufacturing use products registered for industrial/commercial/institutional water treatment or processing uses}

ENVIRONMENTAL HAZARDS: This pesticide is toxic to fish and aquatic organisms. Do not discharge effluent containing this product into lakes, ponds, streams, estuaries, oceans or public waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (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 local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

STORAGE & DISPOSAL: {Optional statements – usage depends on whether or not refillable or nonrefillable containers are used and whether or not product is packaged for household/residential use only}

{Nonrefillable container - household/residential use}

[Keep this product dry in its tightly closed container when not in use. Store in a cool, dry, well-ventilated area. Keep away from heat or open flame. Nonrefillable container. Do not reuse or refill this container. Rinse empty container thoroughly with water to dissolve all material prior to disposal. Offer for recycling if available. Do not contaminate food or feed by storage or disposal or cleaning of equipment. FOR DISPOSAL OF A CONTAMINATED OR DECOMPOSING PRODUCT SEE EMERGENCY HANDLING.]

{Refillable container – household/residential use}

[Keep this product dry in its tightly closed container when not in use. Store in a cool, dry, well-ventilated area. Keep away from heat or open flame. Do not contaminate food or feed by storage or disposal or cleaning of equipment. FOR DISPOSAL OF A CONTAMINATED OR DECOMPOSING PRODUCT SEE EMERGENCY HANDLING. Refillable container. Refill this container with calcium hypochlorite only. Do not use this container for any other purpose. Rinse empty container thoroughly with water to dissolve all material prior to disposal.]

{Nonrefillable container - non-household/residential use}

[Keep this product dry in its tightly closed container when not in use. Store in a cool, dry, well-ventilated area. Keep away from heat or open flame. Do not contaminate food or feed by storage or disposal or cleaning of equipment. FOR DISPOSAL OF A CONTAMINATED OR DECOMPOSING PRODUCT SEE EMERGENCY HANDLING. Nonrefillable container. Do not reuse this container. Offer for recycling if available. Rinse empty container thoroughly with water to dissolve all material prior to disposal.]

{Refillable container – non-household/residential use}

[Keep this product dry in its tightly closed container when not in use. Store in a cool, dry, well-ventilated area. Keep away from heat or open flame. Do not contaminate food or feed by storage or disposal or cleaning of equipment. FOR DISPOSAL OF A

M/B

CONTAMINATED OR DECOMPOSING PRODUCT SEE EMERGENCY HANDLING.

Refillable container. Refill this container with calcium hypochlorite only. Do not use this container for any other purpose. Cleaning of this container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. Rinse empty container thoroughly with water to dissolve all material prior to disposal.]

~~{(Redundant statements to be deleted) [(On ICM products only — EPA Label Manual, chap. 13 p. 5) Do not contaminate food or feed by storage or disposal or cleaning of equipment.] For disposal of a contaminated or decomposing product, see Emergency Handling.}~~

EMERGENCY HANDLING: In case of contamination or decomposition — Do not reseal container. Immediately remove container to an open and well-ventilated outdoor area by itself. Flood with large amounts of water. Dispose of the container and any remaining contaminated material in an approved landfill area.

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

READ ALL PRECAUTIONARY STATEMENTS BEFORE USE.**{Use 1} [[Swimming pools]**

[This product is a designed to dissolve slowly providing a steady source of available chlorine in swimming pools to control the growth of algae, kill bacteria and destroy organic contaminants.] [For best results follow a weekly program with our [brand] System. Consult your authorized [brand] dealer for advice on the system that best suits your pool and your lifestyle.] [Take a pool water sample to your authorized [brand] dealer regularly for a detailed water analysis.]

HOW TO USE: One tablet weighs 20 grams (3/4 ounce). Add the recommended dosages of this product during evening hours while the filter pump is running. You can measure the product in two ways: Use the clean, dry scoop if provided. Do not use any other scoop. Do not use scoop for any other purpose. Use the markings on the container if a scoop is not provided.

You may place the product into your pool in the following ways:

1. Use a floating dispenser or feeder designed for this product. Use only new feeders or floaters or ones that have previously contained only this product. Floating dispenser or feeder should be free of all other water treatment products before adding recommended amount of this product.
2. Use the skimmer. Skimmer basket should be free of all other water treatment products before adding recommended amount of this product.
3. Do not reuse floaters or feeders from other brands of dry chlorinator tablets. Do not throw tablets directly into pool or use in any chlorinating device that has been used with other chlorinating compounds. **[Do not pre-mix this product.] [Only add this product directly to your pool.]**

[For best results follow a weekly program with our [brand] system. Consult your authorized [brand] dealer for advice on the system that best suits your pool and your lifestyle.]

[Take a pool water sample to your authorized [brand] dealer regularly for a detailed water analysis.]

Directions for use in (brand name) Feeder

Before use, read the appropriate installation instructions and operating manual for your (brand name) Pool Feeder.

1. Start the filter pump and check chlorine residual with a reliable test kit.
2. [Fill the pellet container with this product only. Adjust chlorine feed rate setting according to the operating instructions in the feeder manual.] {Alternate 2.} [Place cartridge(s) into feeder unit and adjust chlorine feed rate setting according to the operating instructions in the manual.]
3. After 24 hours, check the chlorine residual. If 1 to 4 ppm, leave the feed rate setting, if below 1 ppm, increase the feed rate. Allow sufficient time (e.g. one day) after changing the feed rate setting for the chlorine residual to readjust. The pool should not be re-entered until the 1 to 4 ppm chlorine residual is established.
4. Always maintain pH between 7.2 and 7.6 by using a suitable pH adjuster according to directions on the label for such products.
5. If cyanuric acid is used to stabilize available chlorine, follow label directions for this product and maintain the chlorine residual at 1 to 4 ppm as determined by the test kit.
6. Refer to operating manuals for feed rate information.

WATER BALANCE: For best product performance, swimmer comfort and crystal clear water, maintain pH in the 7.2-7.6 range. Maintain total alkalinity in the 60-120 parts per million (ppm) ranges. Maintain calcium hardness above 200 ppm. Use a reliable test kit that measures all these ranges. Use the [HTH] (brand name) Pool Care Products to make adjustments. Follow label directions for each product.

OPENING YOUR POOL: Adjust and maintain pH in the 7.2 to 7.6 range. Follow "Shock Treatment" directions on this package. Allow 30 minutes for product to disperse. Test free available chlorine residual with a pool test kit. Do not re-enter pool until the free available chlorine residual is 1 to 4 ppm. Repeat treatment as needed.

ROUTINE CHLORINATION: Throughout the pool season, adjust and maintain pH to 7.2-7.6 and add 6 to 8 ounces of this product (8 to 11 tablets) per 10,000 gallons of pool water daily or as often as needed to maintain chlorine residual at 1 to 4 ppm.

FOR POOLS STABILIZED USING [HTH] (brand name) STABILIZER CONDITIONER: Add 3-4 ounces (4 to 5 tablets) per 10,000 gallons every other day or as often as needed to maintain the free available chlorine residual at 1-4 ppm. Follow "HOW TO USE" directions on this package.

SHOCK TREATMENT: Adjust and maintain pH to 7.2-7.6 with [HTH pH Plus®] or [HTH pH Minus] (brand name). Follow label directions. Shock treat using [Sock It® Superchlorinator & Shock Treatment] or [Super Sock It®] (brand name). Follow label directions on those products. Follow "HOW TO USE" directions on this package. Do not re-enter pool until the free available chlorine residual is 1 to 4 parts per million (ppm).

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PREVENTATIVE TREATMENT: Shock treat your pool weekly to prevent pool problems. Use [Sock It® Superchlorinator & Shock Treatment] or [Super Sock It®] (brand name). Follow directions for these products. An additional shock treatment may correct problems which are caused by high bathing loads and heavy wind and rainstorms. Additional shock treatments will also remove unpleasant odors, eye irritation and algae which has a green color and slimy feeling.

TO DETERMINE YOUR POOL CAPACITY IN U.S. GALLONS, USE THE APPROPRIATE FORMULA BELOW:

POOL SHAPE FORMULA (Use measurements in feet only)

RECTANGULAR - Length x Width x Average Depth x 7.5 = Total Gallons.

ROUND - Diameter x Diameter x Average Depth x 5.9 = Total Gallons.

OVAL - Maximum Length x Maximum Width x Average Depth x 5.9 = Total Gallons.

FREE FORM - Surface Area (Sq. Feet) x Average Depth x 7.5 = Total Gallons]

- [Step 1: Sanitize
- Step 2: Shock
- Step 3: Add Algaecide]

**[[HTH] [HTH POOLIFE] (Brand Name) HELPLINE
[866-HTH-POOL] [866-4-POOL-FUN]**

Toll Free
Call 7 days a week with your questions concerning pool water care. 8:00 a.m. - 10:00 p.m. Eastern Time

[Visit [brand] : www.xxx.com]

{Optional}



{Use 2} [(Spa & Hot Tubs)]

Apply 0.5 oz. of product per 500 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 7.6. 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 0.5 oz. of product per 500 gallons of water over the surface to maintain a chlorine concentration of 5 ppm. Do not enter spa until chlorine residual is 2-5 ppm.

After each use, shock treat with 1.5 oz. of this product per 500 gallons of water to control odor and algae.

During extended periods of disuse, add 1.5 oz. of product daily per 500 gallons of water to maintain a 3 ppm chlorine concentration.]

{Optional – refers to product guide on this label}

- [HTH Spa Product Guide
- Maintain
- Step 1
- Step 2
- Step 3
- Enhance
- Prevent]

{ICM Dosing Table}

[Available Chlorine,
ppm

Nominal Actual Number of Tablets Volume in Gallons

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1	0.9	1	4000
5	4.9	1	700
10	9.8	1	350
25	27.4	1	125
50	45.7	1	75
100	114.3	1	30
200	205.8	3	50
500	457.2	2	15
600	685.9	2	10
1000	914.5	4	15
4000	4115.1	6	5]

{Use 3}.

[HUBBARD AND IMMERSION TANKS - {Following revision made to clarify use and for product stewardship reasons – use rate remains unchanged. Applicable to this section and all others below where text change indicated.}Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 25 ppm is achieved. ~~Add 0.5 oz. of this product per 100 gallons of water before patient use to obtain a chlorine residual of 25 ppm, as determined by a suitable test kit.~~ Adjust and maintain the water pH to between 7.2 and 7.6. After each use drain the tank. Add 0.5 oz. to a bucket of water and circulate this solution through the agitator of the tank for 15 minutes and then rinse out the solution. Clean tank thoroughly and dry with clean cloths.]

[HYDROTHERAPY TANKS – Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 1 ppm is achieved. ~~Use a 5 ppm dosage by adding 1 oz. of this product per 1000 gallons of water to obtain a minimum chlorine residual of 1 ppm, as determined by a suitable chlorine test kit, after satisfying any chlorine demand.~~ Tank should not be entered until the chlorine residual is below 3 ppm. Adjust and maintain the water pH to between 7.2 and 7.6. Operate pool filter continuously. Drain pool weekly, and clean before refilling.]

{Use4} [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.. Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 100 ppm is achieved. ~~Prepare a 100 ppm sanitizing solution by thoroughly mixing 1 oz. of this product with 40 gallons of water. If no test kit is available, prepare a sanitizing solution by thoroughly mixing 1 oz. of this product with 20 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 reestablish 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 reused 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. Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 100 ppm is achieved. ~~Prepare a 100 ppm sanitizing solution by thoroughly mixing 1 oz. of this product with 40 gallons of water. If no test kit is available, prepare a sanitizing solution by thoroughly mixing 1 oz. of this product with 20 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. 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 reestablish 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 reused for sanitizing purposes.

FLOW/PRESSURE METHOD - Disassemble equipment and thoroughly clean after use. Assemble equipment in operating position prior to use. Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 200 ppm is achieved. ~~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 1 oz. product with 20 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. Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 200 ppm is achieved. ~~by mixing the product in a ratio of 1 oz. product with 20 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.

[COARSE] SPRAY 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. Using a suitable chemical feed dispenser, dissolve and dose

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the chlorinated solution until a concentration of 200 ppm is achieved or use a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 600 ppm is achieved. ~~Prepare a 200 ppm sanitizing solution of sufficient size by thoroughly mixing the product in a ratio of 1 oz. product with 20 gallons of water. Prepare a 600 ppm solution by thoroughly mixing the product in a ratio of 3 oz. product with 20 gallons of water.~~ Use spray equipment which can resist hypochlorite solutions. Always empty and rinse spray equipment with potable water after use. Thoroughly spray 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.]

{Use 5} [SANITIZATION OF POROUS FOOD CONTACT SURFACES

RINSE METHOD - Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 600 ppm is achieved. Clean surfaces in the normal manner. Rinse all surfaces thoroughly with the 600 ppm solution, maintaining contact for at least 2 minutes Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 200 ppm is achieved.

Prior to using equipment, rinse all surfaces with a 200 ppm available chlorine solution. Do not rinse and do not soak equipment overnight.

~~Prepare a 600 ppm solution by thoroughly mixing 3 oz. of this product with 20 gallons of water. Clean surfaces in the normal manner. Rinse all surfaces thoroughly with the 600 ppm solution, maintaining contact for at least 2 minutes. Prepare a 200 ppm sanitizing solution by thoroughly mixing 1 oz. of this product with 20 gallons of water. Prior to using equipment, rinse all surfaces with a 200 ppm available chlorine solution. Do not rinse and do not soak equipment overnight.~~

IMMERSION METHOD - Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 600 ppm is achieved. Clean equipment in the normal manner. Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 200 ppm is achieved. ~~Prepare a 600 ppm solution by thoroughly mixing, in an immersion tank, 3 oz. of this product with 20 gallons of water. Clean equipment in the normal manner. Prepare a 200 ppm sanitizing solution by thoroughly mixing 1 oz. of this product with 20 gallons of water.~~ Prior to using, immerse equipment in the 200 ppm sanitizing solution for at least 2 minutes and allow the sanitizer to drain. Do not rinse and do not soak equipment overnight.

[COARSE] SPRAY METHOD - Pre-clean all surfaces after use. Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 600 ppm is achieved. Use spray equipment which can resist hypochlorite solutions. Always empty and rinse spray equipment with potable water after use. Thoroughly spray 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. Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 200 ppm is achieved. ~~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 3 oz. product with 20 gallons of water. Use spray equipment which can resist hypochlorite solutions. Always empty and rinse spray equipment with potable water after use. Thoroughly spray 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 1 oz. of this product with 20 gallons of water.]

{Use 6} [SANITIZATION OF NONPOROUS NON-FOOD CONTACT SURFACES

RINSE METHOD - Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 200 ppm is achieved. ~~Prepare a sanitizing solution by thoroughly mixing 1 oz. of this product with 20 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 - Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 200 ppm is achieved. ~~Prepare a sanitizing solution by thoroughly mixing, in a immersion tank, 1 oz. of this product with 20 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.

Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 200 ppm is achieved. ~~[COARSE] SPRAY 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 1 oz. product with 20 gallons of water. Use spray equipment which can resist hypochlorite solutions. Prior to using equipment, thoroughly spray all surfaces until wet, allowing excess sanitizer to drain. Vacate area for at least 2 hours.]

{Use 7} [DISINFECTION OF NONPOROUS NON-FOOD CONTACT SURFACES

RINSE METHOD - Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 600 ppm is achieved. ~~Prepare a disinfecting solution by thoroughly mixing 3 oz. of this product with 20 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 - Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 600 ppm is achieved. 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.]

{Use 8} [SANITIZATION OF POROUS NON-FOOD CONTACT SURFACES

RINSE METHOD - Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 600 ppm is achieved. ~~Prepare a sanitizing solution by thoroughly mixing 3 oz. of this product with 20 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 - Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 600 ppm is achieved. ~~Prepare a sanitizing solution by thoroughly mixing, in an immersion tank, 3 oz. of this product with 20 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 the sanitizer to drain. Do not rinse equipment with water after treatment.

[COARSE] SPRAY METHOD - Cleaning and sanitize non-food contact surfaces with 600 ppm available chlorine solution. Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 600 ppm is achieved. ~~After cleaning, sanitize non-food contact surfaces with 600 ppm available chlorine by thoroughly mixing the product in a ratio of 3 oz. of this product with 20 gallons of water.~~ Use spray equipment which can resist hypochlorite solutions. Always empty and rinse spray equipment with potable water after use. Prior to using equipment, thoroughly spray all surfaces until wet, allowing excess sanitizer to drain. Vacate area for at least 2 hours.]

{Use 9} [SEWAGE & 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 has been reduced to or below the maximum permitted by the controlling regulatory jurisdiction.

On the average, satisfactory disinfection of secondary waste water 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 bacterial kill must be emphasized. The MPN of the effluent, which is directly related to the water quality standards 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 waste water disinfection.

1. Mixing: It is imperative that the product and the waste water be instantaneously and completely flash mixed to assure reaction with every chemically active soluble and particulate component of the waste water.
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.]

{Use 10} [SEWAGE AND WASTEWATER TREATMENT

EFFLUENT SLIME CONTROL - Apply a 100 to 1000 ppm available chlorine solution at a location which will allow complete mixing. Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 100 to 1000 ppm is achieved. Once control is evident, apply a 15 ppm available chlorine

solution. Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 15 ppm is achieved. Prepare this solution by mixing 2 to 20 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 0.3 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 16 oz. [or 1 tablet of this product] 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 for 4 to 6 hours before completely draining and backwashing filter.]

{Use 11} [DISINFECTION OF DRINKING WATER (EMERGENCY/PUBLIC/INDIVIDUAL SYSTEMS)

PUBLIC SYSTEMS: [Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 0.2 – 0.6 ppm is achieved. ~~Mix a ratio of 1 oz. of this product to 6000 gallons of water.~~] ~~or~~ ~~[Mix a ratio of 10 oz. to 30 oz. of this product into 10 gallons of water to make a 0.5% to 1.5% solution.]~~ 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 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. Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 100 ppm is achieved. ~~This solution can be made by thoroughly mixing 1 oz. of this product into 40 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. Contact 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 a 100 ppm available chlorine sanitizing solution into the well. Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 100 ppm is achieved. ~~this solution can be made by thoroughly mixing 1 oz. of this product into 40 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 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.

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INDIVIDUAL WATER SYSTEMS: FLOWING ARTESIAN WELLS Artesian wells generally do not require disinfection. If analyses indicate persistent contamination, the well should 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 1 grain of this product to 1 gallon of water. One grain is approximately the size of the letter "o" in this sentence. Allow the treated water to stand for 30 minutes. Properly treated water should 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 for several times.

{Use 12} **[PUBLIC WATER SYSTEMS**

RESERVOIRS - ALGAE CONTROL: Hypochlorinate streams feeding the reservoir. 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 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, BASINS, ETC. - Remove all physical soil from surfaces. Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 500 ppm is achieved. ~~Place 4 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 16 oz. [or 1 tablet] 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. Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 50 ppm is achieved. ~~of water containing 1 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. Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 500 ppm is achieved. 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 chlorinated solution. Using a suitable chemical feed dispenser, dissolve and dose the chlorinated

solution until a concentration of 1000 ppm is achieved. After drying, flush with water and return to service. ~~[Sanitize by placing 4 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 1 oz. of this product for each 5 gallons of water (approximately 1000 ppm available chlorine). After drying, flush with water and return to service.]~~

{Use 13} **[EMERGENCY DISINFECTION AFTER FLOODS**

WELLS - Thoroughly flush contaminated casing with a 500 ppm available chlorine solution. Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 500 ppm is achieved. ~~Prepare this solution by mixing 4 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] [Treat well again] 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 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 the reservoir.

BASINS, TANKS, FLUMES, ETC. - Thoroughly clean all equipment, then using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 500 ppm is achieved, 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. Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 1000 ppm is achieved. Allow to stand for 2 to 4 hours, flush and return to service. ~~Thoroughly clean all equipment, then apply 4 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 1 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 16 oz. or 1 tablet 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 16 oz. or 1 tablet 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 back washed of mud and silt, apply 16 oz. or 1 tablet 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.]

[Use 14] **[EMERGENCY DISINFECTION AFTER FIRES**

CROSS CONNECTIONS OR EMERGENCY CONNECTIONS: Hypochlorination or gravity feed equipment should 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.]

[Use 15] **[EMERGENCY DISINFECTION AFTER DROUGHTS**

SUPPLEMENTARY WATER SUPPLIES - Gravity or mechanical hypochlorite feeders should 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. Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 500 ppm is achieved. ~~his solution is made by mixing 1 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.]

[Use 16] **[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.]

[Use 17] **[COOLING TOWER/EVAPORATIVE CONDENSER WATER**

SLUG FEED METHOD - Initial dose: ~~When system is noticeably fouled, apply 10 to 20 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 2 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.~~ When system is noticeably fouled, Use a suitable chemical feed dispenser, and dissolve and dose the chlorinated solution until a concentration of 5 to 10 ppm is achieved. Repeat until control is achieved. Subsequent dose: When microbial control is evident, Use a suitable chemical feed dispenser, and dissolve and dose the chlorinated solution until a concentration of 1 ppm is achieved. Add to 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. ~~residual at 1 ppm. Badly fouled systems must be cleaned before treatment is begun.~~

INTERMITTENT FEED METHOD - Initial Dose: When system is noticeably fouled, use a suitable chemical feed dispenser, and dissolve and dose the chlorinated solution until a concentration of 5 to 10 ppm is achieved. 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 blow down.

Subsequent Dose: When microbial control is evident, use a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 1 ppm is achieved. ~~Initial Dose: When system is noticeably fouled, apply 10 to 20 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 blow down.~~

Subsequent Dose: When microbial control is evident, add 2 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 blow down. Badly fouled systems must be cleaned before treatment is begun.

CONTINUOUS FEED METHOD - Initial dose: when system is noticeably fouled, use a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 5 to 10 ppm is achieved.

[Subsequent Dose: Maintain this treatment level by Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of ppm is achieved.

~~apply 10 to 20 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 10,000 gallons of water lost by blow down to maintain a 1 ppm residual. Badly fouled systems must be cleaned before treatment is begun.~~

BRIQUETTES OR TABLETS: Initially slug dose the system using a suitable chemical feed dispenser, dissolving and dosing the chlorinated solution until a concentration of 5 ppm is achieved. Badly fouled systems must be cleaned before treatment is begun.

Subsequent Dose: When microbial control is evident, use a suitable chemical feed dispenser to dissolve and dose the chlorinated solution until a concentration of 1 ppm is achieved. Control and keep the chlorine residual at 1 ppm. Badly fouled systems must be cleaned before treatment is begun.]

~~Initially slug dose the system with 10 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 2 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.]~~

[Use 18] **[LAUNDRY SANITIZERS**

HOUSEHOLD LAUNDRY SANITIZERS

IN SOAKING SUDS - Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 200 ppm is achieved. ~~Thoroughly mix 1 Tbs. 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 - Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 200 ppm is achieved. ~~Thoroughly mix 1 Tbs. of this product to 10 gallons of wash water containing clothes to provide 200~~

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ppm available chlorine. Wait 5 minutes, then add soap or detergent and start the wash/rinse cycle.

COMMERCIAL LAUNDRY SANITIZERS

Wet fabrics or clothes should be spun dry prior to sanitization. Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 200 ppm is achieved. ~~Thoroughly mix 1 oz. of this product with 20 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 this product if the available chlorine level has dropped below 200 ppm.

FEDERALLY INSPECTED MEAT & POULTRY PLANT LAUNDRY SANITIZERS: Wet fabrics which contact meat or poultry products directly or indirectly should be spun dry prior to sanitization. Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 200 ppm is achieved. ~~Thoroughly mix 4 oz. of this product with 20 gallons of water to yield 200 ppm available chlorine.~~ Promptly after mixing the sanitizer, add the solution into the prewash prior to washing fabrics 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 this product if the available chlorine level has dropped below 200 ppm. Thoroughly rinse fabrics with potable water at the end of the laundering operation.]

{Use 19} [FARM PREMISES

Remove all animals, poultry, and feed from premises, vehicles, and enclosures. Remove all litter and manure from floors, walls and surfaces of barns, pens, stalls, chutes and other facilities occupied or traversed 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. Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 1000 ppm is achieved. ~~A 1000 ppm solution can be made by thoroughly mixing 2 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.]

{Use 20} [PULP AND PAPER MILL PROCESS WATER SYSTEMS

SLUG FEED METHOD - Initial Dose: When system is noticeably fouled use a suitable chemical feed dispenser to dissolve and dose the chlorinated solution until a concentration of 5 to 10 ppm is achieved. ~~noticeably fouled, apply 10 to 20 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, fouled use a suitable chemical feed dispenser to dissolve and dose the chlorinated solution until a concentration of 1 ppm is achieved. ~~add 2 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.~~

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, use a suitable chemical feed dispenser to dissolve and dose the chlorinated solution until a concentration of 5 to 10 ppm is achieved. ~~apply 10 to 20 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 blow down.

Subsequent Dose: When microbial control is evident, use a suitable chemical feed dispenser to dissolve and dose the chlorinated solution until a concentration of 1 ppm is achieved. ~~add 2 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 blow down. Badly fouled systems must be cleaned before treatment is begun.

CONTINUOUS FEED METHOD Initial dose: When system is noticeably fouled, use a suitable chemical feed dispenser to dissolve and dose the chlorinated solution until a concentration of 5 to 10 ppm is achieved.

Subsequent Dose: Maintain this treatment level by using a suitable chemical feed dispenser to dissolve and dose the chlorinated solution until a concentration of 1 ppm is achieved. ~~Initial dose: When system is noticeably fouled, apply 10 to 20 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 10,000 gallons of water lost by blow down to maintain a 1 ppm residual. Badly fouled systems must be cleaned before treatment is begun.]

BRIQUETTES OR TABLETS: Using a suitable chemical feed dispenser, dissolving and dosing the chlorinated solution until a concentration of 5 ppm is achieved. ~~Initially slug dose the system with 10 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, using a suitable chemical feed dispenser, dissolving and dosing the chlorinated solution until a concentration of 1 ppm is achieved. ~~add 2 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.]

{Use 21} [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 1 ton of potatoes. Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 500 ppm is achieved. ~~Thoroughly mix 4 oz. of this product to 10 gallons of water to obtain 500 ppm available chlorine.~~

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. Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 1 ppm is achieved. The bee domicile is disinfected by spraying with a

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0.1 ppm solution until all surfaces are thoroughly wet. Again, use a suitable chemical feed dispenser to dissolve and dose the chlorinated solution until a concentration of 0.1 ppm is achieved. Allow the domicile to dry until all chlorine odor has dissipated. ~~This solution is made by thoroughly mixing 1/4 Tsp. of this product to 200 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. Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 200 ppm is achieved. ~~Thoroughly mix 1 oz. of this product with 20 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 reused to sanitize eggs.

FRUIT & VEGETABLE WASHING - Thoroughly clean all fruits and vegetables in a wash tank. Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 25 ppm is achieved. ~~Thoroughly mix 1 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.

SEEDS - To control bacterial spot (*Xanthomonas vesicatoris*) on Pimento seeds, initially remove moist seeds from ripe fruits. To control surface fungi and bacteria on tomato seeds initially wash seeds. Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 39,000 ppm is achieved. Immediately soak seeds in 39,000 ppm solution for 15 minutes with continuous agitation. After treatment rinse seeds in potable water for 15 minutes. Dry seeds to normal moisture. ~~The solution may be made~~

MUSHROOMS - To control bacterial blotch (*Pseudomonas tolaasii*), use a 100 to 200 ppm solution prior to watering mushroom production surfaces Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 100 to 200 ppm is achieved. The first ~~This solution may be made by mixing 0.2 to 0.4 oz. of this product with 10 gallons of water.~~ First application should begin when pins form, and thereafter, between breaks on a need basis depending on the occurrence of bacterial blotch. This product may be applied directly to pins to control small infection foci. Apply 1.5 to 2.0 oz. per square foot of growing space.

POST-HARVEST ROOTS - To control and reduce the spread of soft rot causing organisms in water and on sweet potatoes (*Ipomoea batatas*), spray or dip the potatoes with a 150 to 500 ppm solution for 2 to 5 minutes. Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 150 to 500 ppm is achieved. ~~Thoroughly mix 0.3 to 1.0 oz. of this product per 10 gallons of water to obtain this solution. Monitor the chlorine concentration and change the solution after one hour or as needed.~~ Change the solution after one hour or as needed.]

[Use 22] [AQUACULTURAL USES

FISH PONDS - Remove fish from ponds prior to treatment. Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 10 ppm is achieved. ~~Thoroughly mix 20 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. Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 200 ppm is achieved. ~~Thoroughly mix 1 oz. of this product to 20 gallons of water to obtain 200 ppm available chlorine.~~ Porous equipment should soak for one hour.

MAINE LOBSTER PONDS - Remove lobsters, seaweed etc. from ponds prior to treatment. Drain the pond. Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 600 ppm is achieved. ~~Thoroughly mix 1200 oz. 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 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.

Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 0.5 ppm is achieved. Maintain the temperature at ~~Thoroughly mix 1 oz. of this product to 10,000 gallons of water at 50 to 70°F to obtain 0.5 ppm available chlorine.~~ **CONDITIONING LIVE OYSTERS** - Expose oysters to this 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.

CONTROL OF SCAVENGERS IN FISH HATCHERY PONDS - Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 200 ppm is achieved. ~~Prepare a solution containing 200 ppm of available chlorine by mixing 0.5 oz. of product 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 0 ppm, as determined by a test kit.]

[Use 23] [SANITIZATION OF DIALYSIS MACHINES

Flush equipment thoroughly with water prior to using this product. Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 600 ppm is achieved. ~~Thoroughly mix 7 oz. of this product to 60 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 insure that no available chlorine remains in the system.

This product is recommended for decontaminating single and multipatient hemodialysate systems. This product has been shown to be an effective disinfectant

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(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 should 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 available from the Hepatitis Laboratories, CDC, Phoenix, AZ 85021.]

{Use 24} [TOILET BOWL SANITIZERS

[These products are marketed as individual packages for placement in the toilet. Therefore, use directions are not appropriate.]

{Use 25} [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 using a suitable chemical feed dispenser. Brush or spray roof or siding with this solution. ~~Mix 1 oz. of this product per gallon of water and brush or spray roof or siding. After 30 minutes, rinse by hosing with clean water.]~~

{Use 26} [BOAT BOTTOMS

To control slime on boat bottoms, sling a plastic tarp under boat, retaining enough water to cover the fouled bottom area, but not allowing water to enter enclosed area. This envelope should contain approximately 500 gallons of water for a 14 foot boat. Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 35 ppm is achieved. ~~Add 3.5 oz. of this product to this water to obtain a 35 ppm available chlorine concentration.~~ Leave immersed for 8 to 12 hours. Repeat if necessary. Do not discharge the solution until the free chlorine level has dropped to 0 ppm, as determined by a swimming pool test kit.]

{Use 27} [ARTIFICIAL SAND BEACHES

To sanitize the sand, spray a 500 ppm available chlorine solution at frequent intervals. Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 500 ppm is achieved. ~~To sanitize the sand, spray a 500 ppm available chlorine solution containing 0.1 oz. of this product per gallon of water at frequent intervals. Small areas can be sprinkled with a watering can.]~~

{Use 28} [FOOD PROCESSING PLANTS

TREATMENT OF FEDERALLY INSPECTED MEAT & POULTRY PLANT POTABLE WATER SUPPLIES: Solutions of this product containing 1% available chlorine will effectively disinfect the water supply in Federally Inspected Meat & Poultry Plants. The solutions should be fed into the water supply by a hypochlorinator on the intake side of the pump. An available chlorine residual of 0.1 to 0.6 ppm must be maintained throughout the water distribution system to assure adequate disinfection. A regular testing program should be initiated to make sure that the proper chlorine residuals are present at all times. To make a 1% solution use a suitable chemical feed dispenser to dissolve and dose the chlorinated solution until a concentration of 10,000 ppm (1%) is achieved] ~~To make a 1% solution, mix 10 ounces of this product into 5 gallons of water.~~

COOLING WATER IN CANNERIES: Solutions of this product containing 1% available chlorine will sanitize cooling water, protect canned goods from contamination and spoilage and prevent staining of cans. The solution should be fed into cooling tanks or channels to reach a concentration of 2 ppm available chlorine. Check every two or three hours to be sure that an available chlorine residual of 2 ppm is maintained throughout the cooling system. Use a suitable chemical feed dispenser to dissolve and dose the chlorinated solution until a concentration of 10,000 ppm (1%) is achieved].

~~To make a 1% solution, mix 10 ounces of this product into 5 gallons of water.~~

POULTRY DRINKING WATER - Spray or flush with a chlorinated solution using a suitable chemical feed dispenser to dissolve and dose the chlorinated solution until a concentration of 5,000 ppm (0.5%) is achieved] Treat poultry drinking water to a dosage of 1 to 5 ppm available chlorine. Use a suitable chemical feed dispenser to dissolve and dose the chlorinated solution until a concentration of 1 to 5 is achieved] ~~Spray or flush with a solution containing 1 oz. of this product for every gallon of water. Treat poultry drinking water to a dosage of 1 to 5 ppm available chlorine by adding 1 to 5 oz. of this product per 5000 gallons of water.~~

FISH FILLETING - Eviscerated and degilled fish removed from the fishing vessel are placed in a wash tank of seawater or fresh water which has been treated with enough product to produce a chlorine residual of 25 ppm, as determined by a test kit. Use a suitable chemical feed dispenser to dissolve and dose the chlorinated solution until a concentration of 25 is achieved] Remove fish from treated water 24 to 48 hours before filleting. After scaling, the fish are again washed in a 25 ppm solution, and are ready for filleting.

PECAN CRACKING AND DYEING Using a suitable chemical feed dispenser, dissolve and dose the chlorinated solution until a concentration of 1000 ppm is achieved. ~~Prepare a 1000 ppm available chlorine soaking solution by adding 1 oz. of this product for each 5 gallons of water to obtain a 1000 ppm available chlorine content.~~ Soak for a minimum of 10 minutes. After removal, age pecans for 24 hours. Before bleaching, pecans are placed in a rotary cleaner where they are washed, drained, and soaked in a 2% sulphuric acid bath at 80 to 90°F for 1 minute. Transfer to a ~~Use a suitable chemical feed dispenser to dissolve and dose the chlorinated solution until a concentration of 5000 ppm is achieved.~~ solution containing 100 oz. of this product for each 100 gallons of water (5000 ppm). After 4 to 8 minutes, they are drained and washed in a 1% sulphuric acid bath at 80 to 90°F. They are then dried.]

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