550-198 (08-22-2011 (1/18

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

AUG 22 2011

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

(b) (6), (b) Regulatory Analyst
Univar
17425 NE Union Hill
Redmond, WA. 98052

Subject: Liquichlor 12.5% Solution
EPA Registration Number 550-198
Application Date: August 9, 2011
Received Date: August 9, 2011

Dear (b) (6), (b)

This acknowledges receipt of your Notification submitted in accordance with the provisions of PR Notice 98-10 under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) section 3(c)9.

Proposed Notification

- Revisions to Storage and Disposal Statement in accordance with PR Notice 2007-4.

General Comments

Based on a review of the material submitted, the notification is acceptable. Please submit a finished label with the revised language to this Office for our files.

Should you have any questions or comments concerning this letter, please contact (b) (b) (6), (b) at (b) (6), (b) (7)(C).

Sincerely,
(b) (6), (b) (7)(C)

Regulatory Management Branch II
Antimicrobials Division (7510P)

2/18

Please read instructions on reverse before completing form. Form Approved, OMB No. 2070-0060

Print Form

EPA

United States
Environmental Protection Agency
Washington, DC 20460

☐ Registration
☐ Amendment
☒ Other

OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number 550-198	2. EPA Product Manager (b) (6), (b)	3. Proposed Classification ☐ None ☐ Restricted
4. Company/Product (Name) Liquichlor 12.5% Solution	PM# 32	
5. Name and Address of Applicant *(Include ZIP Code)* Univar USA Inc. 17425 NE Union Hill Road Redmond, WA 98052 ☐ *Check if this is a new address*	6. **Expedited Review.** In accordance with FIFRA Section 3(c)(3)(b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____	

Section - II

☐ Amendment - Explain below.
☐ Resubmission in response to Agency letter dated _____
☒ Notification - Explain below.
☐ Final printed labels in response to Agency letter dated _____
☐ "Me Too" Application.
☐ Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Notification of label change per PR Notice 2007-4. See attached Notification Certification statement. Label is amended to include additional new Storage and Disposal Statements for Nonrefillable containers > 5 gallons. Also a notation is made clarifying that the existing Storage and Disposal Statements are for Nonrefillable containers < 5 gallons.

Section - III

1. Material This Product Will Be Packaged In:

Child-Resistant Packaging	Unit Packaging	Water Soluble Packaging	2. Type of Container
☐ Yes* ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Metal ☐ Plastic ☐ Glass ☐ Paper ☐ Other (Specify) _____
* *Certification must be submitted*	If "Yes" Unit Packaging wgt. / No. per container	If "Yes" Package wgt / No. per container	

3. Location of Net Contents Information	4. Size(s) Retail Container	5. Location of Label Directions
☐ Label ☐ Container		☐ On Label ☐ On Labeling accompanying product

6. Manner in Which Label is Affixed to Product ☐ Lithograph ☐ Paper glued ☐ Stenciled ☐ Other _____

Section - IV

1. Contact Point *(Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)*

Name	Title	Telephone No. (Include Area Code)
(b) (6),	(b) (6), (b) (7)	(b) (6), (b)

Certification

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

6. Date Application Received (Stamped)

RECEIVED 8-9-11

2. Signature (b) (6), (b) (7)(C)	3. Title (b) (6), (b) (7)(C)
4. Typed Name (b) (6), (b) (7)	5. Date Aug 8, 2011

Regarding: Liquichlor 12.5% Solution, EPA Reg. No. 550-198
Notification dated 08/08/11.

RECEIVED 8-9-11

Notification Certification Statement

Notification of label change per PR Notice 2007-4. This notification is consistent with the guidance in PR Notice 2007-4 and the requirements of EPA's regulations at 40 CFR 156.10, 156.140, 156.144, 156.146, and 156.156. No other changes have been made to the labeling or the Confidential Statement of Formula for this product. I understand that it is a violation of 18 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if the amended label is not consistent with the requirements of 40 CFR 156.10, 156.140, 156.144, 156.146, and 156.156, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under section 12 and 14 of FIFRA.

(b) (6), (b) (7)(C)

[redacted]

4/18

Univar
17425 NE Union Hill Rd.
Redmond, WA 98052
USA

T 425 889-3496
F 425 889-3746
www.univarusa.com

UNIVAR

August 8, 2011

VIA CERTIFIED MAIL

RECEIVED 8-9-11

Document Processing Desk (NOTIF)
Office of Pesticide Programs (7504P)
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue N.W.
Washington, DC 20460-0001

RE: Liquichlor 12.5% Solution
EPA Reg. No. 550-198
Notification of Label Amendment per PR Notice 2007-4

Please find enclosed, a completed Application for Pesticide Registration (EPA Form 8570-1), a Notification Certification Statement, and one copy of the amended label with changes clearly marked.

Changes are made to the Storage and Disposal statement on our Liquichlor 12.5% Solution label, EPA Reg. No. 550-198, per PR Notice 2007-4. Under the Storage and Disposal statements on the Master Label after the notation [*For product sold in nonrefillable product containers*]:

- Just before the words "Triple rinse as follows:" add the notation: [*Use the following for containers < 5 gallons*]
- Add another triple rinsing instruction for nonrefillable containers in larger than 5 gal. containers as follows: [*Use the following for containers > 5 gallons or 50 lbs.*] Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

The above is exact wording as set forth in the regulations and PR Notice for 2007-4 Appendix B.

Thank you for your assistance. If you have any questions concerning this notification or require any additional information, please don't hesitate to contact me at (b) (6), (b) (7)(C)

Sincerely,
(b) (6), (b) (7)(C)

(b) (6), (b)
Regulatory Analyst

Enclosures
CC: (b) (6), (b) (7)(C)

EPA Master Label Copy

RECEIVED 8-9-11

5/18

Liquichlor® 12.5% Solution

For Institutional and Industrial Uses. Do Not Store In or About Dwellings.

ACTIVE INGREDIENT:	
Sodium hypochlorite	12.5%
OTHER INGREDIENTS:	87.5%
TOTAL	100%

KEEP OUT OF REACH OF CHILDREN

DANGER

FIRST AID

If Inhaled:
- Move person to fresh air.
- If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.
- Call a Poison Control Center or doctor for further 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 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 eyes.
- 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 the Poison Control Center or a doctor.
- Do not give anything by mouth to an unconscious person.

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.

Distributed by
Univar USA Inc.
17425 NE Union Hill Road, Redmond, WA 98052
(425) 889-3400

EPA Reg. No. 550-198
EPA Est. No. 550-PA-004

NET CONTENTS:

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, streams, ponds, estuaries, oceans or other 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.

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 within one month of receipt. Use a chlorine test kit and increase dosage, as necessary, to obtain the required level of available chlorine.

*[NOTE TO EPA: The following Storage and Disposal Statements are on product labels of **Refillable** Containers]*

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

*[NOTE TO EPA: The following Storage and Disposal Statements are on product labels of **Nonrefillable** Containers]*

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. Do not contaminate food or feed by storage, disposal or cleaning of equipment. *Nonrefillable Container.* Do not reuse or refill this container. Offer for recycling if available. Clean container promptly after emptying. [*Use the following for containers < 5 gallons*] Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake 10 seconds. Pour rinsate into application equipment or a mix tank to store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.
[*Use the following for containers > 5 gallons or 50 lbs.*] Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix

tank or store rinsate for later use or disposal. Repeat this procedure two more times.

[NOTE TO EPA: All of the above information appears on a main product label. Under the Directions for Use, after Storage and Disposal Statements, the main label has a note "See Product Bulletin for additional precautions and specific directions for use." The Product Bulletin is in a clear sticky back pouch placed next to the main label on the container. The Product Bulletin includes all of the above information and additionally the following specific directions for use.]

SWIMMING POOL WATER DISINFECTION

For a new pool or spring start-up, superchlorinate with 52 to 104 fl. oz. of this product per 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 and 7.6. Adjust and maintain the alkalinity of the pool to between 50 and 100 ppm.

Re-entry into treated swimming pools is prohibited above levels of 4 ppm of chlorine due to risk of bodily harm.

To maintain the pool, add manually or by a feeder device 11 fl. oz. of this product per 10,000 gallons of water to yield an available chlorine residual between 0.6 and 1.0 ppm. by weight. Stabilized pools should maintain a residual of 1.0 to 1.5 ppm available chlorine. Test the pH, available chlorine residual and alkalinity of the water frequently with appropriate test kits. Frequency of water treatment will depend upon temperature and number of swimmers. Re-entry into treated swimming pools is prohibited above levels of 4 ppm of chlorine due to risk of bodily harm.

Every 7 days, or as necessary, superchlorinate the pool with 52 to 104 fl. oz. of this product per 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. Do not re-enter pool until the chlorine residual is between 1.0 and 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 the pool within 24 hours prior to discharge.

WINTERIZING POOLS: While water is still clear and clean, apply 3 fl. oz. of this product per 1,000 gallons of water while filter is running to obtain a 3 ppm available chlorine residual, as determined by a suitable test kit.

Cover pool, prepare heater, filter and heater components for winter by following manufacturer's instructions.

SPAS, HOT TUBS, IMMERSION TANKS, ETC.

SPAS/HOT TUBS: Apply 5 fl. oz. of this product per 1,000 gallons of water to obtain a free available chlorine concentration of 5 ppm, as determined by a suitable chlorine test kit. Adjust and maintain 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.

Re-entry into treated spa/hot tubs is prohibited above levels of 5 ppm of chlorine due to risk of bodily harm.

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

After each use, shock treat with 8 fl. oz. of this product per 500 gallons of water to control odor and algae.

During extended periods of disuse, add 3 fl. oz. of this product daily per 1,000 gallons of water to maintain a 3 ppm chlorine concentration.

HUBBARD AND IMMERSION TANKS: Add 5 fl. oz. of product per 200 gallons of water before patient used to obtain a chlorine residual of 25 ppm, as determined by a suitable test kit. Adjust and maintain water pH to between 7.2 and 7.6. After each use drain the tank. Add 5 fl. oz. of this product 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: Add 1 fl. oz. of this product per 1,000 gallons of water to obtain a chlorine residual of 1 ppm, as determined by a suitable chlorine test kit. Pool 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.

SANITATION OF NON POROUS 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 fl. oz. of this product per 10 gallons of water. If no test kit is available, prepare a sanitizing solution by thoroughly mixing 2 fl. oz. of this product per 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 fl. oz. of this product per 10 gallons of water. If no test kit is available, prepare a sanitizing solution by thoroughly mixing 2 fl. oz. of this product per 10 gallons of water to provide approximately 200 ppm available chlorine by weight. Clean equipment in the normal manner. Prior to use, immerse equipment in the sanitizing solution for at least 2 minutes and allow the sanitizer to drain. 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. 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 200 ppm available chlorine sanitizing solution equal to 110% of volume capacity of the equipment by mixing this product in a ratio of 2 fl. oz. per 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 this product in a ratio of 2 fl. oz. per 10 gallons of water. Pump solution through 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 this product in a ratio of 2 fl. oz. per 10 gallons of water. Prepare a 600 ppm solution by thoroughly mixing this product in a ratio of 6 fl .oz. per 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 a 600 ppm solution with a 200 ppm available chlorine solution.

SANITIZATION OF POROUS FOOD CONTACT SURFACES

RINSE METHOD: Prepare a 600 ppm solution by thoroughly mixing 6 fl. oz. of this product with 10 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 2 fl. oz. of this product with 10 gallons of water. Prior to using equipment, rinse all surfaces with the 200 ppm available chlorine solution. Do not rinse and do not soak equipment overnight.

IMMERSION METHOD: Prepare a 600 ppm solution by thoroughly mixing in an immersion tank 6 fl. oz. of this product with 10 gallons of water. Clean equipment in the normal manner. Immerse equipment in the 600 ppm solution for at least 2 minutes. Prepare a 200 ppm sanitizing solution by thoroughly mixing 2 fl. oz. of this product with 10 gallons of water. Prior to using equipment, immerse all surfaces in a 200 ppm available chlorine solution. Do not rinse or soak equipment overnight.

SPRAY/FOG METHOD: Preclean all surfaces after use. Prepare a 600 ppm available chlorine sanitizing solution of sufficient size by thoroughly mixing this product in a ratio of 6 fl. oz. per 10 gallons of water. Use spray or fogging equipment which can resist hypochlorite solutions. Always empty and rinse spray/fog equipment with potable water after use. Thoroughly spray or fog all surfaces until wet, allowing excess sanitizer to drain. Vacate area for at least 2 hours. Prior to using equipment, rinse all surfaces with a 200 ppm available chlorine solution. Prepare a 200 ppm sanitizing solution by thoroughly mixing 2 fl. oz. of this product with 10 gallons of water.

SANITIZATION OF NON POROUS NON-FOOD CONTACT SURFACES

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

SPRAY/FOG METHOD: Preclean all surfaces after use. Prepare a 200 ppm available chlorine sanitizing solution of sufficient size by thoroughly mixing this product in a ratio of 2 fl. oz. per 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 NON POROUS NON-FOOD CONTACT SURFACES

RINSE METHOD: Prepare a disinfection solution by thoroughly mixing 6 fl. 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 fl. oz. of this product with 10 gallons of water to provide approximately 600 ppm available chlorine by weight. Clean equipment in 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 fl. 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 with water after treatment and do not soak equipment overnight.
IMMERSION METHOD: Prepare a sanitizing solution by thoroughly mixing 6 fl. 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 the sanitizer to drain. Do not rinse equipment with water after treatment.
SPRAY/FOG METHOD: After cleaning, sanitize non-food contact surfaces with a 600 ppm available chlorine sanitizing solution of sufficient size by thoroughly mixing this product in a ratio of 6 fl. oz. per 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 must be evaluated by determining that the total number of coliform bacterial 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 wastewater effluent can be obtained when the chlorine residual is 0.5 ppm after 15 minutes contact. Although the chlorine residual is the critical factor in disinfection, the importance of correlating chlorine residual with 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 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 about 0.5 ppm after 15 minutes of contact time.

SEWAGE & WASTEWATER TREATMENT

EFFLUENT SLIME CONTROL: Apply a 100 to 1,000 ppm available chlorine solution at a location which will allow complete mixing. Prepare this solution by mixing 10 to 100 fl. oz. of this product per 100 gallons of water. Once control is evident, apply a 15 ppm available chlorine solution. Prepare this solution by mixing 3 fl. oz. of this product per 100 gallons of water.
FILTER BEDS: SLIME CONTROL: Remove filter from service, drain to a depth of 1 foot above filter sand, and add 80 fl. oz. of this 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 fl. oz. of this product per 100 gallons of water. Begin feeding this solution with a hypochlorinator until a free available chlorine residual of at least 0.2 ppm and no more than 0.6 ppm is attained throughout the distribution system. Check water frequently with a chlorine test kit. Bacteriological sampling must be conducted at a frequency not less than 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 fl. oz. of this product into 10 gallons of water. After covering the well, pour the 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 in water is noted. Stop pump and wait at least 24 hours. After 24 hours flush well until all traces of chlorine have been removed from the water. Consult your local Health Department for further details.

INDIVIDUAL WATER SYSTEMS: DRILLED, DRIVEN, & BORED WELLS: Run pump until water is as free from turbidity as possible. Pour a 100 ppm available chlorine sanitizing solution into the well. This solution can be made by thoroughly mixing 1 fl. oz. of this product into 10 gallons of water. Add 5 to 10 gallons of clean, chlorinated water to the well in order to force the sanitizer into the rock formation. Wash the exterior of pump cylinder with the sanitizer. Drop pipeline into well, start pump and pump water until strong odor of chlorine in water is noted. Stop pump and wait at least 24 hours. After 24 hours flush well until all traces of chlorine have been removed from the water. Deep wells with 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.

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 minutes 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 drop of this product to 20 gallons of water. 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 several times.

PUBLIC WATER SYSTEMS

RESERVOIRS: ALGAE CONTROL: Hypochlorinated 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 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 complete, the system must be flushed free of all heavily chlorinated water.

NEW TANKS, BASINS, ETC.: Remove all physical soil from surfaces. Place 20 fl. oz. of this product per 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 fl. oz. of this product per 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 fl. 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 fl. oz. of this product per 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 fl .oz. of this product for each 5 gallons of water (approximately 1,000 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 fl. 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 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 apply 20 fl. oz. of this product per 5 cu. ft. of water to obtain a 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 fl. oz. of this product for each 5 gallons of water (1,000 ppm available chlorine). Allow to stand for 2 to 4 hours, flush and return to service.

FILTERS: When the sand filter needs replacement, apply 80 fl. 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 fl. oz. per each 20 sq. ft. of sand. Water should stand at a depth of 1 foot above the surface of the filter bed for 4 to 24 hours. When the filter beds can be backwashed of mud and silt, apply 80 fl. oz. of this product per each 50 sq. ft., allowing 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 residual of at least 10 ppm remains after a 24 hour retention time. Use a chlorine test kit.

EMERGENCY DISINFECTION AFTER FIRES

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

EMERGENCY DISINFECTION AFTER DROUGHTS

SUPPLEMENTARY WATER SUPPLIES: Gravity or mechanical hypochlorite feeder 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. This solution is made by mixing 5 fl. oz. of this product for each 10 gallons of water. During the filling of the containers, dose with sufficient amounts of this product to provide at least a 0.2 ppm chlorine residual. Use a chlorine test kit.

EMERGENCY DISINFECTION AFTER MAIN BREAKS

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

COOLING TOWER/EVAPORATIVE CONDENSER WATER

SLUG FEED METHOD: Initial Dose: When system is noticeably fouled, apply 52 to 104 fl. oz. 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 fl. 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 fl. 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 fl. 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. 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 had been lost by blowdown. Badly fouled systems must be cleaned before treatment is begun.
CONTINUOUS FEED METHOD: Initial Dose: When system is noticeably fouled, apply 52 to 104 fl. oz. of this product per 10,000 gallons of water to obtain 5 to 10 ppm available chlorine.
Subsequent Dose: Maintain this treatment level by starting a continuous feed of 1 fl. oz. 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.

IRRIGATION WATER CONVEYANCE SYSTEMS

To aid in keeping water-emitting devices and the irrigation water distribution system from becoming plugged by suspended solids, magnesium and calcium precipitation, manganese-iron oxides and sulfides, algae, bacteria, and slime.
General Instructions: Apply this product only to center pivot, lateral move, side-wheel roll, solid set, hand move, traveler, big gun, end tow, Low Energy Precision Application Systems, or micro-irrigation systems (e.g., surface or subsurface drip emitters and micro-spray). Do not apply this product to any other type of irrigation system. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop may result from use inconsistent with dosage instructions. The injection apparatus and irrigation system must be properly calibrated and maintained. Questions about calibration and maintenance should be directed to State Cooperative Extension Specialists, equipment manufacturers, or other experts. Do not connect an irrigation system (including greenhouse systems), while using this product to treat the system, to a public water system unless the prescribed safety devices for public water systems are in place and are properly functioning. A person knowledgeable of the system and responsible for its operation, or someone under the direct supervision of the responsible person, must start up or shut down the system and make any necessary adjustments including calibration.
Specific Irrigation System Requirements: The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located

on the irrigation pipeline to prevent water source contamination from backflow. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back towards the injection pump. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being drawn from the supply tank when the irrigation system is either automatically or manually shut down. The system must contain functional interlocking controls, (e.g., pressure switch or flow meter) to automatically shut off the pesticide injection pump when the water pump motor stops or, in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected. The irrigation mainline or water pump must include a functional pressure switch that will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected. Systems must use a metering pump, such as a positive displacement injection pump (e.g., piston or diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Irrigation systems connected to a public water system must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent, in the water supply line upstream from the point of pesticide introduction. As an alternative to the RPZ, the water from a public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.

Substituted Devises: Alternative technology referenced in USEPA's "List of Alternative Chemigation Safety Equipment" may be substituted for specific backflow prevention devices.

Please note: State chemigation rules may necessitate protective measures in addition to those specified hereinabove.

Application/Dosage Instructions: Before chlorination is undertaken, a water quality analysis should be performed to quantify inorganic solids such as sand and silt; organic solids such as algae, bacteria, and slime; dissolved solids such as iron, sulfur, sodium chlorides, and calcium; and pH of the water. If the pH is above 7.5, the water must be acidified if chlorination is to be effective. The application concentration and application frequency should be based on the water analysis. To determine injection rates referenced below, use the following formulas:

Table 1: Injection Rate in Gallons per Hour For Positive Displacement Pumps	
$IR = \frac{0.006 \times Q \times C}{P}$	IR = Injection Rate Q = Irrigation System Flow Rate (gal/min) C = Desired Concentration of Available Chlorine (ppm) P = Concentration of Product Solution (percent)

Table 2: Injection Rate in Ounces per Hour For Positive Displacement Pumps	
$IR = \frac{0.77 \times Q \times C}{P}$	IR = Injection Rate Q = Irrigation System Flow Rate (gal/min) C = Desired Concentration of Available Chlorine (ppm) P = Concentration of Product Solution (percent)

Table 3: Injection Rate (ppm) For Proportional Rate Injection Pumps	
$IR = \frac{C \times 100}{P}$	IR = Injection Rate C = Desired Concentration of Available Chlorine (ppm) P = Concentration of Product Solution (percent) 1% = 10,000 ppm

CONTINUOUS FEED: Inject the required amount of this product into the irrigation system to obtain 1 to 5 ppm available chlorine, until a concentration of 1 to 2 ppm of free (residual) chlorine can be measured at the distant end of the irrigation distribution system. Use a chlorine test kit.
Example: Using a positive displacement pump injection system **(Tables 1 & 2)** with an Irrigation flow rate (Q) of 100 gallons per minute (gpm), for a desired Concentration (C) of 5 ppm available chlorine (with 1 to 2 ppm residual chlorine measured at distant end of irrigation system), and concentration of this product solution (P)is 12.5: Inject 0.24 gallon (30 ounces) per hour (IR) of this product.
SYSTEM MAINTENANCE: At the end of the irrigation cycle, inject the required amount of this product into the system to attain 10 to 20 ppm available chlorine for the length of time required to fill the entire system with this solution. When chlorination is completed, the system must be flushed free of all heavily chlorinated water.
Example: Using a positive displacement pump injection system **(Tables 1 & 2)** with an Irrigation flow rate (Q) of 100 gallons per minute (gpm), for a desired Concentration (C) of 15 ppm available chlorine, and Concentration of this Product solution (P) is 12.5: Inject 0.72 gallon (92 ounces) per hour (IR) of this product.
SHOCK TREATMENT: One to two times each month, at the end of the irrigation cycle, inject the required amount of this product into the system to attain 20 to 30 ppm available chlorine for the length of time required to fill the entire system with this solution. When chlorination is completed, the system must be flushed free of all heavily chlorinated water.
Example: Using a positive displacement pump injection system **(Tables 1 & 2)** with an Irrigation flow rate (Q) of 100 gallons per minute (gpm), for a desired Concentration (C) of 25 ppm available chlorine, and Concentration of this Product solution (P) is 12.5: Inject 1.2 gallons (154 ounces) per hour (IR) of this product.

LAUNDRY SANITIZERS

Household Laundry Sanitizers

IN SOAKING SUDS: Thoroughly mix 2 fl. oz. of this product per 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 fl. oz. of this product per 10 gallons of wash containing clothes to provide 200 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. Thoroughly mix 2 fl. oz. of this product to 10 gallons of water to yield 200 ppm available chlorine. Promptly after mixing the sanitizer, add the solution into the prewash prior to washing fabrics/clothes in the regular wash cycle with a good detergent. Test the level of available chlorine, if solution has been allowed to stand. Add more of this product if the available chlorine level has dropped below 200 ppm.

FARM PREMISES

Remove all animals, poultry, and feed from premises, conveyances, 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 1,000 ppm available chlorine for a period of 10 minutes. A 1,000 ppm solution can be made by thoroughly mixing 11 fl. oz. of this product per 10 gallons of water. Immerse all halters, ropes, and other types of equipment used in handling and restraining animals and poultry, as well as the cleaned forks, shovels and scrapers used for removing litter and manure. Ventilate buildings, conveyances,

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 noticeably fouled, apply 52 to 104 fl. 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 fl. oz. of this product per 10,000 gallons 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 fl. 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. Badly fouled systems must be cleaned before treatment is begun.
Subsequent Dose: When microbial control is evident, add 11 fl. oz. of this product per 10,000 gallons in the system daily, or as needed to maintain control and keep the chlorine residual at 1 ppm. Apply half (or 1/3, 1/4, or 1/5) of the initial dose when half (or 1/3, 1/4, or 1/5) of the water in the system has been lost by blowdown. Badly fouled systems must be cleaned before treatment is begun.
CONTINUOUS FEED METHOD: Initial Dose: When system is noticeably fouled, apply 52 to 104 fl. 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 1 fl. 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.

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 fl. oz. of this product with 2 gallons of water to obtain a 500 ppm available chlorine.
LEAFCUTTING BEE CELLS & BEE BOARDS: Disinfect leaf cutting bee cells and bee boards by immersion in a solution containing 1 ppm available chlorine for 3 minutes. Allow cells to drain for 2 minutes and dry 4 to 5 hours or until no chlorine odor can be detected. This solution is made by thoroughly mixing 1 Tsp. of this product per 100 gallons of water. The bee domicile is disinfected by spraying with 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 fl. oz. of this product per 10 gallons of warm water to produce a 200 ppm available chlorine solution. The sanitized temperature should not exceed 130 degrees 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.
FRUIT AND VEGETABLE WASHING: Thoroughly clean all fruits and vegetables in a wash tank. Thoroughly mix 5 fl. oz. of this product per 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.
MEAT AND POULTRY PLANTS: Authorized by USDA for use in Federally inspected meat and poultry plants. Chlorine may be present in processing water of meat and poultry plants at concentrations up to 5 parts per million (ppm) calculated as available chlorine. Also, chlorine may be present in poultry chiller intake water, and in carcass wash water at concentrations up to 50 parts per million

calculated as available chlorine. Chlorine must be dispensed at a constant and uniform level and the method or system must be such that a controlled rate is maintained. Thoroughly mix 1.15 oz. of this product in 200 gallons of water to make a sanitizing solution of 5 ppm available chlorine, or 11.5 oz. in 200 gallons of water for 50 ppm available chlorine.

AQUACULTURAL USES

FISH PONDS: Remove fish from ponds prior to treatment. Thoroughly mix 103 fl. oz. of this product with 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 fl. oz. of this product with 10 gallons of water to obtain a 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. Thoroughly mix 96 gallons per 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 pond before returning lobsters to pond.

CONDITIONING LIVE OYSTERS: Thoroughly mix 5 fl. oz. of this product with 10,000 gallons of water at 50 degrees to 70 degrees F to obtain 0.5 ppm available chlorine. 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 degrees F.

CONTROL OF SCAVENGERS IN FISH HATCHERY PONDS: Prepare a solution containing 200 ppm of available chlorine by mixing 2 fl. oz. of this product with 10 gallons of water. Pour into drained pond potholes. Repeat if necessary. Do not put desirable fish back into refilled pond until chlorine residual had dropped to 0 ppm, as determined by a test kit.

SANITIZATION OF DIALYSIS MACHINES

Flush equipment thoroughly with water prior to using this product. Thoroughly mix 6 fl. oz. of this product to 10 gallons of water to obtain at least 600 ppm available chlorine. Immediately use this product in the hemodialysate system allowing for a minimum contact time of 15 minutes at 20 degrees 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 (virucide, fungicide, bacteriocide, 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 which are available from the Hepatitis Laboratories, CDC, Phoenix, AR 85021.

ASPHALT OR WOOD ROOFS AND SIDINGS

To control fungus and mildew, first remove physical soil by brushing and hosing with clean water, and apply a 5,000 ppm available chlorine solution. Mix 5 fl. oz. of this product per gallon of water and brush or spray roof or siding. After 30 minutes, rinse by hosing with clean water.

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. Add 18 fl. 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.

ARTIFICIAL SAND BEACHES

To sanitize the sand, spray a 500 ppm available chlorine solution containing 5 fl. oz. of this product per 10 gallons of water at frequent intervals. Small areas can be sprinkled with a watering can.

CLEANING FORMULATIONS, BLEACHING & NON-PESTICIDE CHEMICAL MANUFACTURING: This product may be used for cleaning formulations, bleaching and non-pesticide chemical manufacturing. Only specifically designed handling and dispensing equipment should be used in accordance with manufacturer's instructions and according to operating instructions or product formulations defined by the use facility.

[NOTE TO EPA: The main product label also includes the following handling and emergency response paragraphs]

CONTAINER ADVICE
KEEP CONTAINER CLOSED
Handling. Always wear protective clothing including goggles, rubber gloves and apron. Wear respiratory protection if local exhaust ventilation is inadequate. Vent container frequently and more often in hot weather to relieve pressure. Loosen closure cautiously when opening and replace closure after each withdrawal. Do not use pressure to empty since this is not a pressure vessel. Wash thoroughly after handling. Empty containers: The empty container retains product vapor and residue. Never add any chemicals to this empty container because violent and dangerous reactions may occur. FOLLOW ALL LABEL WARNINGS EVEN AFTER THE CONTAINER IS EMPTY.

EMERGENCY RESPONSE
For emergency assistance involving chemicals call CHEMTREC day or night at (800) 424-9300. Chemtrec International Tel: 703-527-3887
In case of fire use water spray, dry chemical, or CO_2. Do not use a direct water stream. Use water spray to cool nearby containers exposed to fire. Firefighters should wear self-contained breathing apparatus. In case of spill wear protective equipment including rubber boots, rubber gloves, rubber apron, chemical goggles, and respiratory protection. Flush small spills into waste treatment system with lots of water. For large spills contain, neutralize with dilute sodium bisulfite, flush neutralized material to waste treatement system with lots of water. Avoid contact with acids. Do not use combustible materials such as saw dust to absorb spills. Comply with all governmental regulations on reporting releases.

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