

55852-5

8/15/2006

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August 15, 2006

Heather R. Bjornson  
 Regulatory Assistant  
 Champion Packaging & Distributing  
 c/o Technology Sciences Group, Inc.  
 1101 17<sup>th</sup> Street, N.W., Suite 500  
 Washington, D.C. 20036

Subject: Sun Brite Bleach  
 EPA Registration No. 55852-5  
 Application Date: July 20, 2006  
 Receipt Date: July 24, 2006

Dear Ms. Bjornson:

This acknowledges receipt of your notification, submitted under the provision of PR Notice 98-10, FIFRA section 3(c)9.

**Proposed Notification**

- addition of optional marketing claims
- addition of alternate brand name "Tundra Ultra Bleach"

**General Comments**

Based on a review of the material submitted, the following comments apply:

The notification application is unacceptable for the following reason:

The statement "Wear gloves for added protection" is misleading. It implies that gloves are optional. The product's toxicity rating requires rubber gloves to be worn when handling, as stated in the Precautionary Statements.

Should you have any questions or comments concerning this letter, please contact me at (703) 308-6345.

Sincerely,

Wanda Y. Henson  
 Product Reviewer (32)  
 Regulatory Management Branch II  
 Antimicrobials Division (7510P)

CONCURRENCES							
SYMBOL	7510P	7510P					
URNAME	E. Berg	Henson					
DATE	8/15/06	8/15/06					

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United States  
Environmental Protection Agency  
Washington, DC 20460

<input type="checkbox"/>	Registration
<input type="checkbox"/>	Amendment
<input checked="" type="checkbox"/>	Other

OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number 55852-5	2. EPA Product Manager Emily Mitchell	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) Sun Brite Bleach	PM# 32	
5. Name and Address of Applicant (Include ZIP Code) Champion Packaging & Distributing, Inc. 1840 International Parkway Woodbridge, IL 60517 <input type="checkbox"/> 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

<input type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application.
<input checked="" type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below.

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

The purpose of this notification is to add an alternate brand name and to add optional label claims that are consistent with current EPA approved claims. This notification is not subject to PRIA. This notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR 152.46, and no other changes have been made to the labeling of the Confidential statement of formula of 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 this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA.

Section - III

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No			
* Certification must be submitted		If "Yes" Unit Packaging wgt.	No. per container	If "Yes" Package wgt	No. per container
				<input type="checkbox"/> Metal	<input type="checkbox"/> Plastic
				<input type="checkbox"/> Glass	<input type="checkbox"/> Paper
				<input type="checkbox"/> Other (Specify) _____	
3. Location of Net Contents Information <input type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container		5. Location of Label Directions	
6. Manner in Which Label is Affixed to Product		<input type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled		<input type="checkbox"/> Other _____	

Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)					
Name Heather R. Bjornson, Technology Sciences Group, Inc.		Title Regulatory Assistant		Telephone No. (Include Area Code) (202) 828-8945	
<p align="center"><b>Certification</b></p> <p>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.</p>					6. Date Application Received  (Stamped)
2. Signature 		3. Title Regulatory Assistant to Champion Packaging & Distributing			
4. Typed Name Heather R. Bjornson		5. Date July 20, 2006			

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**WASHINGTON**

1150 18th Street, N.W.  
Suite 1000  
Washington, D.C. 20036  
Telephone 202 223-4392  
Fax 202 872-0745

July 20, 2006

Emily Mitchell  
Antimicrobial Division (7504P)  
Office of Pesticide Products  
U.S. Environmental Protection Agency  
Room S-4900, One Potomac Yard  
2777 South Crystal Drive  
Arlington, VA 22202-4501

**Re: Champion Packaging & Distributing, Inc.: Sun Brite Bleach (EPA Registration No. 55852-5)**

**Notification per PR-Notice 98-10**

**SACRAMENTO**

712 Fifth Street  
Suite A  
Davis, CA 95616  
Telephone 530 757-1298  
Fax 530 757-1299

Dear Ms. Mitchell:

Technology Sciences Group, Inc., on behalf of Champion Packaging & Distributing, Inc. is submitting the enclosed notification for the above-referenced product. The purpose of this notification is to add an alternate brand name and to add optional label claims that are consistent with the current EPA approved label.

You will find in support of this notification

- 1) Notification application form;
- 2) One redline copy of the draft label; and
- 3) Three clean copies of the label.

Please do not hesitate to contact me if you have any questions regarding this notification. Please note: TSG has moved and all correspondence regarding this notification should be sent to my attention at: 1150 18<sup>th</sup> Street NW, Suite 1000, Washington D.C. 20036.

Sincerely,

Heather R. Bjornson  
Regulatory Assistant to Champion Packaging & Distributing, Inc.  
Ph. (202) 828-8945  
[hbjornson@tsgusa.com](mailto:hbjornson@tsgusa.com)

**CANADA**

275 Slater Street  
Suite 900  
Ottawa, Ontario  
K1P 5H9  
Telephone 613 247-6285  
Fax 613 236-3754

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# SUN BRITE BLEACH

[Alternate Brand Name: SunBrite Ultra Bleach, TUNDRA Ultra Bleach]

Active Ingredient:	
Sodium Hypochlorite	6.0%
Inert Ingredients	94.0%
TOTAL	100.0%

**DISINFECT \* SANITIZES \* DEODORIZES  
VIRUCIDE \* TUBERCULOCIDE**

**COMMERCIAL, INSTITUTIONAL USE**

KEEP OUT OF REACH OF CHILDREN

**DANGER**

**FIRST AID:**

**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 SWALLOWED:** Call 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 doctor. Do not give anything by mouth to an unconscious person.

**IF ON SKIN:** 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.

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.

FOR MEDICAL EMERGENCY Call INFOTRAC 1-800-535-5053  
Additional Information for front panel:

NEW HIGHER CONCENTRATION FORMULA  
KILLS HIV AND TB ON HARD NON-POROUS ENVIRONMENTAL SURFACES  
DISINFECTS AND DEODORIZES  
WHITENS  
BRIGHTENS LAUNDRY  
KILLS GERMS  
FORMULATED FOR FOODSERVICE APPLICATIONS  
REMOVES STAINS  
FARM- DAIRY USE  
RESTAURANT USE  
FOOD PROCESSING PLANT USE  
BACTERICIDAL  
MILDEWICIDAL  
FUNGICIDAL

This product can be used on hard non-porous surfaces in commercial, institutional, hospital and household premises (including kitchens, bathrooms, nurseries, sick rooms, laundry rooms) eating establishments, pet kennels, veterinary premises, farms, dairies, and food processing plants.

**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 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 product is toxic to fish and aquatic organisms. Do not discharge effluent containing this product into lakes, streams, ponds, 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.

Net Weight:

Packaged By:  
Champion Packaging & Dist. Inc.  
1840 Internationale Parkway  
Woodridge, IL 60517

FOR CHEMICAL EMERGENCY DURING TRANSPORTATION ONLY

Call INFOTRAC 1-800-535-5053

24 hours per day, 7 days per week

EPA Reg. No. 55852-5  
Est. Reg. 55852-IL-001

**Physical and Chemical Hazards**

Strong oxidizer. Flush drains before and after use. Do not use or mix with other household chemicals, such as toilet bowl cleaners, rust removers, and or ammonia containing products. To do so will release hazardous gasses. Prolonged contact with metal may cause pitting or discoloration.

**STORAGE AND DISPOSAL**

Store in a cool, dry area away from direct sunlight and heat to avoid deterioration. In case of spill, flood area 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 re-use empty container and place in trash collection. Do not contaminate food or feed by storage, disposal or cleaning of equipment.

**DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. One Tbsp. (1/2 oz.) of Sun Brite Disinfectant in 1 gallon of water is equivalent to approximately 200 parts per million (PPM) available chlorine. Use a chlorine test kit to determine exact available chlorine concentration and adjust as necessary to obtain specified PPM.

**LAUNDRY**

Use to bleach white and colorfast Acrylics, Cotton, Nylon, Polyester, Rayon (test to be sure). Do not use on Acetate, Leather, Silk, Spandex or Wool.

**BLEACH TEST:** Before using, mix one tablespoon of bleach with 1/2 cup of water in a glass, rubber, porcelain, or plastic container and test a small piece of fabric in a place that doesn't show.

**LAUNDRY:** Before adding clothes, mix 3/4 cup of bleach with water in top-loading 16 gallon machines or mix 1/3 cup bleach with water in front-loading 8 gallon machines. Add clothes. If sanitation is desired, soak clothes for 5 minutes. Wash and rinse with usual cycles. If clothes are in machine the addition of bleach can cause damage.

**REMOVE STAINS:** Mix 1/4 cup of bleach with a gallon of water. Soak stained area for 5 minutes to remove grass, ink, coffee, tea, scorch, fruit, etc. Rinse thoroughly.

Disinfects, sanitizes, and deodorizes by killing most germs and their odors.

**SANITIZING FOOD CONTACT SURFACES:** Before using this product, remove or carefully protect food. Remove gross food particles from surface. Prewash surface with a good detergent and rinse thoroughly with potable water. Mix approximately 1 tablespoon of bleach per gallon of water to prepare a 200-PPM available chlorine solution. Cover surface with bleach solution for at least 2 minutes. Air dry.

**DISINFECTING KITCHEN, DISHES, SINKS:** Use 1/4 cup bleach mixed with a quart of water to soak cleaned dishes, teapot, cups, sinks, etc. for 10 minutes. Rinse with a solution of approximately 1 Tbsp. of bleach per gallon of water to prepare a 200-PPM solution. Do not use on silverware. Bleach solution can be used on porcelain, enamel, etc. surfaces after cleaning. Let air dry.

**DISINFECTING WALLS, FLOORS, AND OTHER HARD INANIMATE SURFACES NOT IN DIRECT CONTACT WITH FOOD:** Prewash surfaces and rinse. Mix 3/4 cup bleach per gallon of water. Spray, rinse, or wipe surface with bleach solution and let stand for 10 minutes. Drain and air-dry.

**DISINFECTING BATHROOM:** Prewash toilet and flush. Pour 1/2 cup bleach into toilet bowl. Scrub with a brush, making sure to get under rim, let stand 10 minutes, flush. Do not use with bowl cleaners or any other household chemicals.

**DEODORIZING GARBAGE CANS:** Wash and rinse. Use 3/4 cup bleach for each gallon of water in can. Empty and let drain.

**EGG SHELL SANITIZING** Thoroughly clean eggs. Mix approximately 1 Tbsp. (1/2 oz) of bleach per gallon 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 apparel. The solution should not be re-used to sanitize eggs.

One Tbsp. (1/2 ounce) of Sun Brite Bleach in 1 gallon of water is equivalent to approximately 200 parts per million (PPM) available chlorine. Use a chlorine test kit to determine exact available chlorine concentration.

<b>FOR SANITIZING</b>	Amount <u>Bleach</u>	Amount <u>Water</u>
Work Surfaces	1 Tbsp.	1 Gallon
Dishes, Glassware, Utensils	1 Tbsp.	1 Gallon
Bathtubs, Showers	1 Tbsp.	1 Gallon
Refrigerators, Freezers	1 Tbsp.	1 Gallon
<b>FOR DISINFECTING</b>		
Floors & Walls	¾ cup	1 Gallon
Mops, Brushes, Brooms & Rugs	¾ cup	1 Gallon
<b>FOR DEODORIZING</b>		
Garbage Cans	¾ cup	1 Gallon
Drains	1 Cup	-----
<b>FOR BLEACHING &amp; WHITENING</b>		
Wooden Surfaces	½ cup	1 Gallon
<b>FOR MOLD, MILDEW &amp; STAIN REMOVAL</b>		
All Surfaces	½ cup	1 Gallon
<b>FOR AGRICULTURAL USES</b>		
Food Egg Sanitization	1 Tbsp.	1 Gallon
Fruits & Vegetables Washing	1 Tbsp.	1 Gallon

#### Instructions

Pre-wash with detergent, rinse, cover surface with bleach solution for at least two minutes, drain, let air dry.

After washing, soak for at least two minutes in bleach solution. Drain and let air-dry.

Wash, rinse, apply bleach solution for at least two minutes, drain, let air dry.

Wash, rinse, apply bleach solution for at least two minutes, drain, let air dry.

Pre-wash surfaces and rinse. Spray, rinse or wipe surface with bleach solution, let stand for ten minutes. Let air dry.

Wash with detergent, apply bleach solution, soak for at least ten minutes. Rinse well.

After washing and rinsing, brush inside with bleach solution. Empty and let drain. Pour into drain. Flush with hot water.

Apply for five minutes, rinse.

Add bleach to detergent solution, apply, rinse.

Wash, rinse, spray with 130 ° F max bleach solution until completely wet, let air dry before casing or breaking. Once solution is used it must not be reused for this purpose.

Wash, rinse, soak in circulating bleach solution (25ppm) for two Minutes. Spray vegetables with bleach solution before packing; use potable water to rinse fruit before packaging. Rinse is to occur only immediately prior to packaging.

• **Garbage cans** - Wash thoroughly with warm soapy solution. Rinse then spread a solution of 1-½ cups of this product per 2 gallons of water over all surfaces. Let stand 10 minutes, then drain.

Avoid prolonged contact with metal since corrosion or discoloration may occur. Do not use this product on chipped enamel.

• **Sanitizing Nonporous Food Contact Surfaces** - Prepare a sanitizing solution by thoroughly mixing 2 Tbsp. (1 oz.) of this product with 2 ½ gallons of water to provide approximately 200 PPM available chlorine by weight. Clean all 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.

• **To Sanitize Milking Equipment:** Prepare sanitizing solution as above immediately prior to use. All surfaces to be sanitized should be properly cleaned before application of chlorine solution. Milking utensils should be submerged in the solution for at least 2 minutes and allowed to drain. Do not rinse equipment with water after treatment. 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. Sanitizers used in automated systems may be used for general cleaning but may not be reused for sanitizing purposes.

• **Sanitizing Porous Food Contact Surfaces:** Prepare a solution of approximately 600 PPM by thoroughly mixing 6 Tbsp. (3 oz.) of this product with 2 ½ gallons of water. Clean surfaces in the normal manner. Rinse all surfaces thoroughly with the 600-PPM solution, maintaining contact with the sanitizer for at least 2 minutes. Prepare a 200 PPM sanitizing solution by thoroughly mixing 2 Tbsp. (1 oz.) of this product with 2 ½ gallon of water. Prior to using equipment, rinse all surfaces with 200-PPM available chlorine solution. Do not rinse with water and do not soak equipment overnight.

**Laundering:** To bleach and sanitize white and colorfast cotton, linen, nylon, Dacron, Orion, polyester, Dynel and rayon in washing machine: ¾ cup of this product per load for conventional washing machine; ½ cup for front load automatic. Add to pre-soak, wash water or first rinse. If clothes are in machine, dilute product in 1 quart water before adding.

**To Whiten Nylon and Other Synthetics** that have turned yellow or gray. 1 tablespoon of this product per gallon water. Soak clean fabric in solution for 15 to 20 minutes. Rinse well. Repeat if necessary.

• **To Remove Stains.** Berry, wine, coffee, tea, ink, grass, dye, medicine stains, scorch and mildew. Make solutions of 2 tablespoons of this product to each quart water. Immerse fabric for 5 to 10 minutes. Rinse well in clear water. Repeat if necessary.

• **Today's Permanent Press Fabrics are Bleachable** and need this product to get out stains and help prevent dirt build up. Wash with regular laundry as directed: Top-load automatics - ¾ cup per load. Wringer-type washers - ¾ cup per load. Front-load automatic ½ cup per load. Use this product with any good laundry soap or detergent. If your washer has an automatic bleach dispenser, follow washer directions. If not, add this product to wash water before laundry is put in. If laundry is put in before wash water then dilute this product in quart of water and add after machine has started agitating and fabrics are thoroughly wet.

• **Disinfecting and Deodorizing Bathrooms:** To disinfect, deodorize, and eliminate mold and mildew from washable surfaces such as tubs, showers, countertops, sinks, ceramic tile and vinyl flooring, spread a solution of 1 ½ cups of this product per 2 gallons of water on clean surface. Let stand 10 minutes, then drain.

• **Toilet Bowls:** To sanitize and deodorize pre-cleaned toilet bowls, use ½ cup of this product. Flush, pour in bleach - swab with brush, making sure to get under the rim, and let stand for 10 minutes. Flush. DO NOT use with bowl cleaners or any other household chemicals.

• **Sickroom Equipment** - Wash all surfaces thoroughly. Rinse, and then spread solution of 1-½ cups of this product per 2 gallons of water over all surfaces. Let stand 10 minutes, then drain.

#### **PROPORTIONS FOR DILUTION OF THIS PRODUCT**

200 PPM: 1 oz. (2 Tbsp.) in 2 ½ gallons of water

600 PPM: 3 oz. (6 Tbsp.) - 2 1/2 gallons of water  
(Use a chlorine test kit to determine exact available chlorine concentration and adjust dosage as necessary.)

**RESTAURANTS, TAVERNS, SODA FOUNTAINS, DAIRIES, ETC.**  
**DIRECTIONS FOR SANITIZING EATING AND DRINKING UTENSILS:**  
Prepare sanitizing solution immediately prior to use.

1. Scrape and pre-wash utensils and glass whenever possible.
2. Wash with good detergent or compatible cleaner.
3. Rinse with clean water.
4. Sanitize in solution of 1 oz to 2 1/2 gallons of water (200 PPM).
5. Immerse utensils at least 2 minutes or for contact time specified by governing sanitary code.
6. Do not reuse sanitizing solution.

**DIRECTIONS FOR USE**  
It is a violation of federal law to use this product in a manner

inconsistent with its labeling.

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

**TABLE OF PROPORTIONS AVAILABLE CHLORINE**

600 PPM - 12 oz. In 10 gal. water  
200 PPM - 4 oz. In 10 gal. water

**SWIMMING POOL WATER DISINFECTION**

For a new pool or spring start-up, superchlorinate with 107 to 213 oz. of product for each, 10,000 gallons of water to yield 5 to 10 PPM available chlorine by weight. Check the level of available chlorine with a test kit. Adjust and maintain pool water pH to between 7.2 to 7.6. Adjust and maintain the alkalinity of the pool to between 50 to 100 ppm. NOTE: This product degrades with age. Use a chlorine test kit and increase dosage as necessary, to obtain the required level of available chlorine. To maintain the pool, add manually or by a feeder device 21 oz. of this product for each 10,000 gallons of water to yield an available chlorine residual between 0.6 to 1.0 PPM by weight. Stabilized pools 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. NOTE: This product degrades with age. Use a chlorine test kit and increase dosage as necessary, to obtain the required level of available chlorine. Every 7 days, or as necessary, superchlorinate the pool with 107 to 213 oz. of product for each 10,000 gallons of water to yield 5 to 10 PPM available chlorine by weight. Check the level of available chlorine with a test kit. Do not enter pool until the chlorine residual drops below 4.0 ppm. NOTE: This product degrades with age. Use a chlorine test kit and increase dosage as necessary, to obtain the required level of available chlorine. 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 & clean, apply 6.5 oz. of product per 1000 gallons, 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 manufacturers' instructions.

**SPAS, HOT TUBS, IMMERSION TANKS, ETC.**

SPAS/HOT-TUBS - Apply 11 oz. of product per 1000 gallons of water to obtain a free available chlorine concentration of 5 PPM, as determined by a suitable chlorine test kit. Adjust and maintain pool water pH to between 7.2 and 7.8. Some oils, lotions, fragrances, cleaners, etc. may cause foaming or cloudy water as well as reduce the efficiency of the product. To maintain the water, apply 11 oz. of product per 1000 gallons of water over the surface to maintain a chlorine concentration of 5 PPM. After each use, shock treat with 17 oz. of this product per 500 gallons of water to control odor and algae. During extended periods of disuse, add 6.5 oz. of product daily per 1000 gallons of water to maintain a 3-PPM chlorine concentration. HUBBARD AND IMMERSION TANKS. Add 11 oz. of this product per 200 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 11 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 - Add 2 oz. of this product per 1000 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.

**SANITIZATION OF NONPOROUS FOOD CONTACT SURFACES**

RINSE METHOD - A solution of 100-PPM available chlorine may be used in the sanitizing solution if a chlorine test kit is available. Solutions containing an initial concentration of 100-PPM available chlorine must be tested and adjusted periodically to insure that the available chlorine does not drop below 50 PPM. Prepare a 100-PPM sanitizing solution by thoroughly mixing 2 oz. of this product with 10 gallons of water. If no test kit is available, prepare a sanitizing solution by thoroughly mixing 4 oz. of this product with 10 gallons of water to provide approximately 200 PPM available chlorine by weight. Clean equipment surfaces in the normal manner. Prior to use, rinse all surfaces thoroughly with the sanitizing solution, maintaining contact with the sanitizer for at least 2 minutes. If solution contains less than 50-PPM available chlorine, as determined by a suitable test kit, either discard the solution or add sufficient product to 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 chlorine test kit is available. Solutions containing an initial concentration of 100-PPM available chlorine must be tested and adjusted periodically to ensure that the available chlorine does not drop below 50 PPM. Prepare a 100-PPM sanitizing solution by thoroughly mixing 2 oz. of this product with 10 gallons of water. If no test kit is available, prepare a sanitizing solution by thoroughly mixing 4 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. 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 re-used for sanitizing purposes.

FLOW/PRESSURE METHOD - Disassemble equipment and thoroughly clean after use. Assemble equipment in operating position prior to use. Prepare a volume of a 200-PPM available chlorine sanitizing solution equal to 110% of volume capacity of the equipment by mixing the product in a ratio of 4-oz. product with 10 gallons of water. Pump solution through the system until full flow is obtained at all extremities, the system is completely filled with the sanitizer and all air is removed from the system. Close drain valves and hold under pressure for at least 2 minutes to ensure contact with all internal surfaces. Remove some cleaning solution from drain valve and test with a chlorine test kit. Repeat entire cleaning/sanitizing process if effluent contains less than 50-PPM available chlorine.

CLEAN-IN-PLACE METHOD - Thoroughly clean equipment after use. Prepare a volume of a 200-PPM available chlorine sanitizing solution equal to 110% of volume capacity of the equipment by mixing the product in a ratio of 4-oz. product with 10 gallons of water. Pump solution through the system until full flow is obtained at all extremities, the system is completely filled with the sanitizer and all air is removed from the system. Close drain valves and hold under pressure for at least 10 minutes to ensure 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 - Pre-clean all surfaces after use. Use a 200-PPM available chlorine solution to control bacteria, mold or fungi and a 600-PPM solution to control bacteriophage. Prepare a 200-PPM sanitizing solution of sufficient size by thoroughly mixing the product in a ratio of 4-oz. product with 10 gallons of water. Prepare a 600-PPM solution by thoroughly mixing the product in a ratio of 13-oz. product with 10 gallons of water. Use spray or fogging equipment, which can resist hypochlorite solutions. Always empty and rinse spray/fog equipment with potable water after use. Thoroughly spray or fog all surfaces until wet, allowing excess sanitizer to drain. Vacate area for at least 2 hours. Prior to using equipment, rinse all surfaces treated with 600-PPM solution with a 200-PPM solution.

**SANITIZING OF POROUS FOOD CONTACT SURFACES**

RINSE METHOD - Prepare a sanitizing solution by thoroughly mixing 13 oz. of this product with 10 gallons of water to provide 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. Prepare a 200-PPM sanitizing solution by thoroughly mixing 4 oz. of this product with 10 gallons of water and rinse all surfaces with this 200-PPM solution. Do not rinse with water and do not soak equipment overnight.

IMMERSION METHOD - Prepare a sanitizing solution by thoroughly mixing in an immersion tank, 13 oz. of this product with 10 gallons of water to provide 600 PPM available chlorine by weight. Clean equipment in the normal manner. Prior to use, immerse equipment in the sanitizing solution, maintaining contact

for at least 2 minutes and allow the sanitizer to drain. Following this, prepare a 200-PPM sanitizing solution by thoroughly mixing 4 oz. of this product with 10 gallons of water and rinse all surfaces with this 200-PPM solution. Do not rinse with water and do not soak equipment overnight.

**SPRAY/FOG METHOD** - Pre-clean all surfaces after use. Prepare a 600-PPM available chlorine sanitizing solution of sufficient size by thoroughly mixing the product in a ratio of 13-oz. product with 10 gallons of water. Use spray or fogging equipment, which can resist hypochlorite solutions. Always empty and rinse spray/fog equipment with potable water after use. Thoroughly spray or fog all surfaces until wet, allowing excess sanitizer to drain. Vacate area for at least 2 hours. Prior to using equipment, rinse all surfaces with a 200-PPM available chlorine solution. Prepare a 200-PPM sanitizing solution by thoroughly mixing 4 oz. of this product with 10 gallons of water.

**SANITIZATION OF NONPOROUS NON-FOOD CONTACT SURFACES**

**RINSE METHOD** - Prepare a sanitizing solution by thoroughly mixing 4 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, 4 oz. of this product with 10 gallons of water to provide approximately 200 PPM available chlorine by weight. Clean equipment in the normal manner. Prior to use, immerse equipment in the sanitizing solution for at least 2 minutes and allow the sanitizer to drain. Do not rinse equipment with water after treatment.

**SPRAY/FOG METHOD** - Pre-clean all surfaces after use. Prepare a 200-PPM available chlorine sanitizing solution of sufficient size by thoroughly mixing the product in a ratio of 4oz. product with 10 gallons of water. Use spray or fogging equipment, which can resist hypochlorite solutions. Prior to using equipment, thoroughly spray or fog all surfaces until wet, allowing excess sanitizer to drain. Vacate area for at least 2 hours.

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

**RINSE METHOD** - Prepare a disinfecting solution by thoroughly mixing 13 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, 13 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 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 13 oz. of this product with 10 gallons of water to provide approximately 600 PPM available chlorine by weight. Clean surfaces in the normal manner. Prior to use, rinse all surfaces thoroughly with the sanitizing solution, maintaining contact with the sanitizer for at least 2 minutes. Do not rinse equipment with water after treatment and do not soak equipment overnight.

**IMMERSION METHOD** - Prepare a sanitizing solution by thoroughly mixing in an immersion tank, 13 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 600 PPM available chlorine by thoroughly mixing the product in a ratio of 13 oz. of this product with 10 gallons of water. Use spray or fogging equipment, which can resist hypochlorite solutions. Always empty and rinse spray/fog equipment with potable water after use. Prior to using equipment, thoroughly spray or fog all surfaces until wet, allowing excess sanitizer to drain. Vacate area for at least 2 hours.

**SEWAGE & WASTEWATER EFFLUENT TREATMENT**

The disinfecting 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 disinfecting 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 disinfecting, 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 disinfecting.

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

**SEWAGE AND WASTEWATER TREATMENT**

**EFFLUENT SLIME CONTROL** - Apply a 100 to 1000-PPM available chlorine solution at a location, which will allow complete mixing. Prepare this solution by mixing 21 to 213 oz. of this product with 100 gallons of water. Once control is evident, apply a 15-PPM available chlorine solution. Prepare this solution by mixing 3 oz. of this product with 100 gallons of water.

**FILTER BEDS - SLIME CONTROL:** Remove filter from service, drain to a depth of 1 ft. above filter sand, and add 170 oz. of product per 20 sq./ft evenly over the surface. Wait 30 minutes before draining water to a level that is even with the top of the filter. Wait for 4 to 6 hours before completely draining and backwashing filter.

**DISINFECTION OF DRINKING WATER (EMERGENCY/PUBLIC/INDIVIDUAL/SYSTEM)**

**PUBLIC SYSTEMS** - Mix a ratio of 2 oz. of this product to 100 gallons of water. Begin feeding this solution with a hypochlorinator until a free available chlorine residual of at least 0.2 PPM and no more than 0.6 PPM is attained throughout the distribution system. Check water frequently with a chlorine test kit. Bacteriological sampling must be conducted at a frequency no less than that prescribed by the National 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 2 oz. of this product into 10 gallons of water. After covering the well, pour the sanitizing solution into the well through both the pipe sleeve opening and the pipeline. Wash the exterior of the pump cylinder also with the sanitizing solution. Start pump and pump water until strong odor of chlorine in water is noted. Stop pump and wait at least 24 hours. After 24 hours flush well until all traces of chlorine have been removed from the water. Consult your local Health Department for further details.

**INDIVIDUAL WATER SYSTEMS: DRILLED, DRIVEN & BORED WELLS** - Run pump until water is as free from turbidity as possible. Pour a 100-PPM available chlorine sanitizing solution into the well. This solution can be made by thoroughly mixing 2 oz. of this product into 10 gallons of water. Add 5 to 10 gallons of clean, chlorinated water to the well in order to force the sanitizer into the rock formation. Wash the exterior of the pump cylinder with the sanitizer. Drop pipelines into the 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 to 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 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 3 drops of this product to 20 gallons of water. Allow the treated water to stand for 30 minutes. Property 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. This process has not been demonstrated to inactivate Cryptosporidium cysts.

**PUBLIC WATER SYSTEMS**

**RESERVOIRS: ALGAE CONTROL** - Hypo chlorinate 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 water flow of at least 2.5 feet per minute to continue under pressure while injecting this product by means of a hypochlorinator. Stop water flow when a chlorine residual test of 50 PPM is obtained at the low-pressure end of the new main section after a 24-hour retention time. When chlorination is completed, the system must be flushed free of all heavily chlorinated water.

**NEW TANKS, BASINS, ETC.** - Remove all physical soil from surfaces. Place 43 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 170 oz. of this product for each 150 to 200 cubic feet of sand. The action of the product dissolving as the water passes through the bed will aid in sanitizing the new sand.

**NEW WELLS** - Flush the casing with a 50-PPM available chlorine solution of water containing 11 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 45 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 11 oz. of this product for each 5 gallons of water (approximately 1000-PPM available chlorine). After drying, flush with water and return to service.

**EMERGENCY DISINFECTION AFTER FLOODS**

**WELLS** - Thoroughly flush contaminated casing with a 500-PPM available chlorine solution. Prepare this solution by mixing 11 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 hypo chlorinating stations upstream of the reservoir. Chlorinate the inlet water until the entire reservoir obtains 0.2-PPM available chlorine residual, as determined by a suitable chlorine test kit. In case of contamination from surface drainage, apply sufficient product directly to the reservoir to obtain a 0.2-PPM available chlorine residual in all parts of the reservoir.

**BASINS, TANKS, FLUMES, ETC.** - Thoroughly clean all equipment, then apply 43 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 11 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 170 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 100 oz. per 20 sq. ft. Water should stand at a depth of 1 foot above the surface of the filter bed for 4 to 24 hours. When filter beds can be backwashed of mud and silt, apply 170 oz. of this product per each 50-sq. ft., allowing the water to stand at a depth of 1 foot above the filter sand. After 30 minutes, drain water to the level of the filter. After 4 to 6 hours, drain, and proceed with normal backwashing.

**DISTRIBUTION SYSTEM** - Flush repaired or replaced section with water. Establish a hypo chlorinating station and apply sufficient product until a consistent available chlorine residual of at least 10-PPM remains after 24-hour retention time. Use a chlorine test kit.

**EMERGENCY DISINFECTION AFTER FIRES**

**CROSS CONNECTIONS OF EMERGENCY CONNECTIONS** - Hypo chlorination 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 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. This solution is made by mixing 11 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 of 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 107 to 213 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 21 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 107 to 213 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 lowdown.

Subsequent Dose: When microbial control is evident, add 21 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 lowdown. Badly fouled systems must be cleaned before treatment is begun.

**CONTINUOUS FEED METHOD** - Initial Dose: When system is noticeably fouled, apply 107 to 213 oz. of this product per 10,000 gallons of water in the system to obtain 5 to 10 PPM available chlorine.

Subsequent Dose: Maintain this treatment level by starting a continuous feed of 2 oz. of this product per 1,000 gallons of water lost by lowdown to maintain a 1 PPM residual. Badly fouled systems must be cleaned before treatment is begun.

**LAUNDRY SANITIZERS**

**Household Laundry Sanitizers**

**IN SOAKING SUDS** - Thoroughly mix 4 oz. of this product to 10 gallons of wash water to provide 200 PPM available chlorine. Wait 5 minutes, and then add soap or detergent. Immerse laundry for at least 11 minutes prior to starting the wash/rinse cycle.

**IN WASHING SUDS** - Thoroughly mix 4 oz. of this product to 10 gallons of wash water containing clothes to provide 200 PPM available chlorine. Wait 5 minutes, then add soap or detergent and start the wash/rinse cycle.

**Commercial Laundry Sanitizes**

Wet fabrics or clothes should be spun dry prior to sanitation. Thoroughly mix 4 oz. of this product with 10 gallons of water to yield 200 PPM available chlorine. Promptly after mixing the sanitizer, add the solution into the Prewash prior to washing fabrics/clothes in the regular wash cycle with a good detergent. Test the level of available chlorine, if solution has been allowed to stand. Add more of this product if the available chlorine level has dropped below 200 PPM.

**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 transverse by animals or poultry. Empty all troughs, racks and other feeding and watering appliances. Thoroughly clean all surfaces with soap or detergent and rinse with water. To disinfect, saturate all surfaces with a solution of at least-1000 PPM available chlorine for a period of 10 minutes. A 1000-PPM solution can be made by thoroughly mixing 21 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, four tains, and waters 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 107 to 213 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 21 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 107 to 213 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 lowdown.

Subsequent Dose: When microbial control is evident, add 21 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 lowdown. Badly fouled systems must be cleaned before treatment is begun.

**CONTINUOUS FEED METHOD - Initial Dose:** When system is noticeably fouled, apply 107 to 213 oz. of this product per 10,000 gallons of water in the system to obtain 5 to 10 PPM available chlorine.

**Subsequent Dose:** Maintain this treatment level by starting a continuous feed of 2 oz. of this product per 1,000 gallons of water lost by lowdown 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 2 oz. of this product to 2 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. This solution is made by thoroughly mixing 2 tsp. of this product to 100 gallons of water. The bee domicile is disinfected by spraying with a 0.1-PPM solution until all surfaces are thoroughly wet. Allow the domicile to dry until all chlorine odors have dissipated. (Not for use in California.)

**FOOD EGG SANITIZATION -** Thoroughly clean all eggs. Thoroughly mix 4 oz. of this product with 10 gallons of warm water to produce a 200-PPM available chlorine solution. The sanitizer temperature should not exceed 130 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 & VEGETABLE WASHING -** Thoroughly clean all fruits and vegetables in a wash tank. Thoroughly mix 11 oz. of this product in 20 gallons of water to make a sanitizing solution of 25-PPM available chlorine. After draining the tank, submerge fruit or vegetables for 2 minutes in a second wash tank containing the recirculating sanitizing solution. Spray rinse vegetables with the sanitizing solution prior to packaging. Rinse fruit with potable water only prior to packaging.

**AQUACULTURAL USES**

**FISH PONDS -** Remove fish from ponds prior to treatment. Thoroughly mix 213 oz. of this product to 10,000 gallons of water to obtain 10 PPM available chlorine. Add more product to the water if the available chlorine level is below 1 PPM after 5 minutes. Return fish to pond after the available chlorine level reaches zero.

**FISH POND EQUIPMENT -** Thoroughly clean all equipment prior to treatment. Thoroughly mix 4 oz. of this product to 10 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. Thoroughly mix 12,800 oz. of this product to 10,000 gallons of water to obtain at least 600 PPM available chlorine. Apply so that all barrows, gates, rocks and dams are treated with product. Permit high tide to fill the pond and then close the gates. Allow water to stand for 2 to 3 days until the available chlorine level reaches zero. Open and allow 2 tidal cycles to flush the pond before returning lobsters to the pond.

**CONDITIONING LIVE OYSTERS -** Thoroughly mix 11 oz. of this product to 10,000 gallons of water at 50 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. (Not for use in California.)

**CONTROL OF SCAVENGERS IN FISH HATCHERY PONDS -** Prepare a solution containing 200 PPM of available chlorine by mixing 4 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.

**SANITIZATION OF DIALYSIS MACHINES**

Flush equipment thoroughly with water prior to using this product. Thoroughly mix 13 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 hemodialysate and DO NOT reuse the spent sanitizer. Rinsate must be monitored with a suitable test kit to ensure that no available chlorine remains in the system.

This product is recommended for decontaminating single and multi-patient hemodialysate systems. This product has been shown to be an effective disinfectant (virucide, fungicide, bactericide, pseudomonicide) when tested by AOAC and EPA test methods. This product may not totally eliminate all vegetative microorganisms in hemodialysate delivery systems due to their construction and/or assembly, but can be relied upon to reduce the number of microorganisms to acceptable levels when used as directed. This product should be used with a disinfectant program that 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 that are available from the Hepatitis Laboratories, CDC, Phoenix, AR 85021.

**ASPHALT OR WOOD ROOFS AND SIDINGS**

To control fungus and mildew, first remove all physical soil by brushing and hosing with clean water, and apply a 5000 PPM available chlorine solution. Mix 11 oz. of this product per gallon of water and brush or spray roof or siding. After 30 minutes, rinse by hosing with clean water. [Not for use in California.]

**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 37 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 chlorine level has dropped to 0 PPM, as determined by a swimming pool test kit. [Not for Use in California]

**ARTIFICIAL SAND BEACHES**

To sanitize the sand, spray a 500-PPM available chlorine solution containing 11 oz. of this product per 10 gal. of water at frequent intervals. Small areas can be sprinkled with a watering can. [Not for Use in California.]

**WAREWASHING**

**FOR SANITIZING TABLEWARE IN LOW TEMPERATURE DISHWASHING MACHINE -**Dispense this product into final rinse water at 100-PPM available chlorine. Do not allow concentration to fall below 50 PPM. Air dry. Dispenser should be set to deliver 6.5 cc of sanitizing solution per gallon of water to give 100 PPM of available chlorine. Only a qualified service representative should set or adjust dispenser on the machine.

**SPECIAL INSTRUCTIONS FOR CLEANING AND DECONTAMINATION AGAINST HIV (AIDS VIRUS) ON SURFACES/OBJECTS SOILED WITH BLOOD/BODY FLUIDS.**

Kills HIV-1 (AIDS virus) on pre-cleaned environmental surfaces/objects previously soiled with blood/body fluids in healthcare settings or other settings in which there is an expected likelihood of soiling of inanimate surfaces/objects with blood or body fluids, and in which the surfaces/objects likely to be soiled with blood or body fluids can be associated with the potential for transmission of Human Immunodeficiency Virus Type 1 (HIV-1) (associated with AIDS).

**Personal Protection:** Disposable latex or vinyl gloves, gowns, masks, and/or eye coverings must be worn during all cleaning and decontamination procedures of blood and other body fluids.

**Cleaning Procedures:** Blood and other body fluids must be thoroughly cleaned from surfaces and objects before applying this product.

**Disinfectant Use and Contact Time:** Effective against HIV-1 (AIDS virus) on hard non-porous surfaces in the presence of a moderate amount of organic soil (e.g. 5% blood serum). Prepare disinfectant by mixing 22 oz. of this product per gallon of water to provide 10,000 PPM of available chlorine. Leave surfaces wet for 5 minutes. Drain and let air-dry.

**Disposal of Infectious Materials:** Blood and other body fluids should be autoclaved and disposed of according to Federal, State, and local regulations for infectious waste disposal.

This product is not to be used as a terminal sterilant/high level disinfectant on any surface or instrument that (1) is introduced into the human body, either into or in contact with the bloodstream or normally sterile areas of the body, or (2) contacts intact mucous membranes but which does not ordinarily penetrate the blood barrier or otherwise enter normally sterile areas of the body. This product may be used to pre-clean or decontaminate critical or semi-critical medical devices prior to sterilization or high level disinfection.

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**SPECIAL INSTRUCTIONS FOR CLEANING AND DECONTAMINATION AGAINST MYCOBACTERIUM TUBERCULOSIS (TB) OF SURFACES/OBJECTS SOILED WITH BODY FLUIDS.**

Kills mycobacterium tuberculosis (TB) on hard non-porous surfaces soiled with body fluids in healthcare settings or other settings in which there is an expected likelihood of soiling of inanimate surfaces/objects with body fluids, and in which the surfaces/objects likely to be soiled with body fluids can be associated with the potential for transmission of mycobacterium tuberculosis.

**Personal Protection:** Disposable latex or vinyl gloves, gowns, masks, and/or eye coverings must be worn during all cleaning and decontamination procedures of blood and other body fluids.

**Cleaning Procedures:** Remove gross filth or heavy soil from surfaces or objects prior to application of product.

**Disinfectant Rate and Contact Time:** Effective against mycobacterium tuberculosis on hard non-porous surfaces in the presence of a moderate amount of organic soils (e.g. sputum). Prepare disinfectant by mixing 22 oz. of this product per gallon of water to provide 10,000 PPM of available chlorine. Leave surfaces wet for 5 minutes. Drain and let air-dry.

**Disposal of Infectious Materials:** Blood and other body fluids should be autoclaved and disposed of according to Federal, State, and local regulations for infectious waste disposal.

NSF approved (Logo on the label)

NSF Reg. No. 135775

Category Code B1, B2, D2, Q4

*Optional Label Claims:*

- For Household Use
- Dilute TUNDRA Ultra Bleach as stated in directions below.
- Wear gloves for added protection.
- Exercise care in handling.
- Check to make sure bottle is always tightly capped.
- Product should be carried and stored in an upright position to avoid spillage.
- Not harmful to septic systems.
- **[ FOR SUPPLEMENTAL DISTRIBUTOR – EPA Company No. 73664 ]** Quality, performance and satisfaction are always double guaranteed at ALDI®. If for any reason you are not 100% satisfied with this product, we will gladly replace the product AND refund your money. When corresponding, please include code information from package.