

52371-1

6/24/2008

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U.S. ENVIRONMENTAL PROTECTION
AGENCY
Office of Pesticide Programs
Antimicrobials Division (7510C)
1200 Pennsylvania Avenue NW
Washington, D.C. 20460

EP
Number:
52371-1

Date of Issuance:
June 24, 2008

Term of Issuance:

Unconditional

Name of Pesticide Product:

**Huish - Sodium
Hypochlorite 6.0**

NOTICE OF PESTICIDE:

- ☒ Registration
☐ Reregistration

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

**Huish Detergents, Inc.
3540 W. 1987 S.
Salt Lake City, UT 84104**

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

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act. Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product (OPP Decision No. 385526) is conditionally registered in accordance with FIFRA sec 3(c)(7)(A) provided that you:

1. Submit and/or cite all data required for registration of your product under FIFRA sec(c)(5) when the Agency requires all registrants of similar products to submit such data; and submit acceptable responses required for re-registration of your product under FIFRA section 4.
2. Make the labeling changes listed below before you release the product for shipment:
 - a) Revise the EPA Registration Number to read, "EPA Reg. No. 52371-1"

Signature of Approving Official:

Emily Mitchell

Emily Mitchell
Acting Product Manager 32
Regulatory Branch II
Antimicrobials Division (7510P)

Date:

JUN 24 2008

b) On page 1 of the product label, you must include the name of the product, "Huish – Sodium Hypochlorite 6.0".

c) On page 1 of the product label, you must revise the First Aid statement to read:

"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 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.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment."

d) On page 2 of the product label, you must revise the Precautionary Statements to read, "DANGER : HIGHLY CORROSIVE. Causes irreversible eye damage and skin burns. May be fatal if inhaled or absorbed through skin. Harmful if swallowed. Do not get in eyes, on skin, or in clothing. Do not breathe dust or spray mists. Wear goggles or face shield, protective clothing and gloves when handling this product. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco. Remove contaminated clothing and wash before reuse."

e) On page 2 of the product label, you must include the Storage and Disposal statement currently located on page 12. Either repeat or move the statement to page 2, directly below the Physical or Chemical Hazards statement.

f) On page 3 of the product label, the claim "Kills Virus that causes Flu" must be made more specific to include the particular organism to be killed. You must also submit all data required to support such a claim.

g) On page 3 of the product label, you must remove the statements "Kills 99.9% of common household germs" and "Disinfects and Deodorizes by Killing (most) Germs and Their Odors". In order to make a qualified "germ" claim on a product label, a product must be registered as a general purpose/broad spectrum disinfectant product with additional label claims against one of the two classes of organisms listed below:

- Fungi - One pathogenic fungi (usually *Trichophyton mentagrophytes*) that is representative of the use sites listed for the product.
- Viruses - One enveloped and/or non-enveloped virus that is representative of the use sites listed for the product.
- All studies to support disinfectant, fungicidal, and virucidal claims must be conducted according to EPA guidelines.
- The front panel of the label for a qualified public health "germ" claim must contain a designator that refers the user to the qualified statements. A qualified statement is one that clearly describes the type of "germ" the product is efficacious against. When the word "germ" is used on the front panel of a label, an asterisk is required to indicate that there is clarifying language elsewhere on the label.

Examples: Front panel - Kills germs*

Back panel - Kills *Salmonella choleraesuis* and *Staphylococcus aureus* and (list virus or fungi)

- In order to make an unqualified "germ" claim on a label, a product must have public health data developed using current EPA guidelines for all three of the major classes of organisms:
- Bacteria - meet the general purpose/broad spectrum disinfectant performance standard per EPA guidelines.
- Fungi - One pathogenic fungi (usually *Trichophyton mentagrophytes*) that is representative of the use sites listed for the product. Studies to be conducted according to EPA guidelines.
- Viruses - One enveloped and non-enveloped virus that is representative of the use sites for the product. Studies to be conducted according to EPA guidelines.
- The claim "germs" can be used without descriptors of the type of organism. No asterisk is required. The claim can appear on the front or back/side panel of a label. However, specific organisms must still be listed on the label.

Examples: Kills Germs

Kills germs in the bathroom and/or kitchen

Qualified statements are optional and can be added to the product label, if desired.

h) On page 5 of the product label, bold the product heading "Laundry Use" in order to make it distinct from the instructions beneath it.

i) On page 5 of the product label, remove the disinfection claims from the statements "To disinfect sanitize laundry" and "To disinfect and deodorize diapers in pails." Laundry may only bear sanitization claims, not disinfection.

j) On page 5 of the product label, bold and capitalize the heading "KITCHEN:" in order to make it distinct from the instructions beneath it.

k) On page 6 of the product label, you must remove the following statement: "Kills *Staphylococcus aureus* (staph), *Salmonella choleraesuis* (salmonella), *Pseudomonas aeruginosa* (pseudomonas)." You must submit data to support these claims.

l) On page 6 of the product label, you must remove the use "animal husbandry" from your label. If you wish to include the use "animal husbandry premises" or similar, you must rephrase it to read as such.

m) On page 6 of the product label, you must move or restate the MOU language statement (currently located on page 8), pertaining to hospital use, directly below the paragraph "This product can be used ... processing plants".

n) On page 6 of the product label, bold and capitalize the headers "DISINFECTING OR DEODORIZING BATHROOMS:" and "TOILET BOWLS:" in order to make them distinct from the instructions beneath them.

o) On page 6 of the product label, you must remove the claim "HAND SANITIZING" and pursuant directions for use. This is an FDA claim and is not allowed on an antimicrobial product.

p) On page 6 and page 8 of the product label, you must revise the term "tile" to read "glazed tile."

q) On page 6 of the product label, you must revise the heading "SANITIZING FOOD CONTACT SURFACES" to read "SANITIZING HARD, NON-POROUS FOOD CONTACT SURFACES".

r) On page 7 of the product label, you must remove the word "kitchen" from the heading "DISINFECTING KITCHEN, DISHES, SINKS". This claim is too vague and directions listed are specific to dishes and sinks.

s) On page 7 of the product label, revise "DISINFECTING [AND ELIMINATING MILDEW ON] WALLS, FLOORS, AND OTHER INANIMATE SURFACES NOT IN DIRECT CONTACT WITH FOOD" to read "DISINFECTION OF [AND ELIMINATION OF MILDEW ON] WALLS, FLOORS, AND OTHER HARD, NON-POROUS, NON-FOOD CONTACT SURFACES".

t) On page 7 of the product label, you must revise the term "shower curtains" to read "non-porous shower curtains", as disinfection claims may not be made for cloth surfaces, and it is unclear that such a claim is not implied.

u) On page 8 of the product label, you must revise the statement "For heavy soil... disinfecting" to read "For heavy soil, pre-clean surface before removing mold, moss, and mildew." The disinfection claim is not acceptable for the listed surfaces "brick, stucco, patio stone, decks, fences, arbors, trellises, patio furniture, flower pots and planters", unless they are specified to be hard, non-porous varieties of these surfaces.

v) On page 8 of the product label, you must revise the heading "Disinfecting" to read "Disinfection of [and removal of mold and mildew from] hard non-porous, non-food contact surfaces".

w) On page 8 of the product label, you must revise the heading "SANITIZING: Food Contact Surface" to read "SANITIZING: Hard, Non-porous Food Contact Surfaces".

x) On page 9 of the product label, you must remove the directions for "Refrigerators, Freezers" unless you clarify that the product is only for use on the outside surface of the refrigerator or freezer.

y) On page 10 of the product label, beneath the subheading "Disinfecting and Deodorizing Bathrooms", revise "from washable surfaces such as tubs..." to read "from hard, non-porous surfaces such as tubs...".

z) On page 10 of the product label, revise the headings "Sickroom Equipment" and "Garbage Cans" to specify whether a sanitization or disinfection (or dual) claim is being made. If a disinfection claim is being made, you must specify that the sickroom equipment is hard and non-porous.

aa) On page 11 of the product label, remove the term "ETC." from the subheading "Restaurants... Dairies". The term is too vague, as all surfaces must be specifically enumerated.

bb) On page 11 of the product label, revise the statement "Immerse utensils at least 2 minutes or for contact time specified by governing sanitary code" to read "Immerse utensils at least 2 minutes or for greater contact time specified by governing sanitary code."

cc) The Agency recognizes that there are several different versions of certain Directions for Use included in the label. However, all versions including a claim for Dairies, Milking Equipment, Farm Premises, and Animal Husbandry Premises must include in that version the "Farm Premises" language included on the product label on page 21.

dd) On page 12 of the product label, in the second paragraph under the heading "Swimming Pool Water Disinfection", revise the range "1.0 to 1.5 ppm" to read "1.0 to 3.0 ppm."

ee) On page 12 of the product label, under the heading "Swimming Pool Water Disinfection", add the following statement to the end the first, second, third, and fifth

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paragraphs: "Re-entry into treated pools is prohibited above levels of 3.0 ppm due to risk of bodily harm."

ff) On page 22 of the product label, under the heading "Briquettes or Tablets", revise the statement "Initially slug does the system" to read "Initially slug dose the system".

Submit three (3) copies of your final printed labeling before distributing or selling the product bearing the revised labeling.

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

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

Sincerely,


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

Enclosure: (Stamped Label)



ACTIVE INGREDIENT:

Sodium Hypochlorite.....6.0%
INERT INGREDIENTS:.....94.0%

KEEP OUT OF REACH OF CHILDREN

DANGER

STATEMENT OF PRACTICAL TREATMENT (FIRST AID)*

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

IF CONTACT WITH SKIN OCCURS, wash with plenty of soap and water.

IF SWALLOWED, drink large quantities of milk or gelatin solution, if these are not available, drink large quantities of water. DO NOT give vinegar or other acids. DO NOT induce vomiting. Get prompt medical attention.

(See additional precautions on side panel)

Manufactured by:
Huish Detergents, Inc.

Salt Lake City, UT 84125
Bowling Green, KY 42101

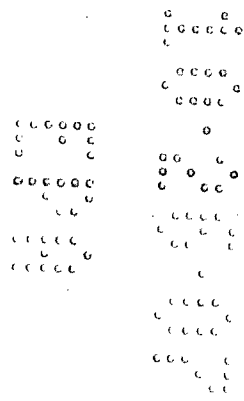
EPA EST
EPA EST

EPA REG NO. EPA EST
NET CONTENTS:

ACCEPTED
with COMMENTS
EPA Letter Dated:

JUN 24 2008

Under the Federal Insecticide,
Fungicide, and Rodenticide Act as
amended, for the pesticide,
registered under EPA Reg. No. 523 71-1



**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. So not return until strong odors have dissipated.

ENVIRONMENTAL HAZARDS

This product is toxic to fish. Do not discharge into lakes, streams, ponds or public waterways unless in accordance with a NPDES permit. For guidance, contact the regional office of the U.S. Environmental Protection Agency.

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.

- Removes/Eliminates Odors
- Removes Tough Stains
- Deodorizes
- Disinfects
- Sanitizes
- Bleaches Out Tough Stains
- Eliminates Odors
- [REDACTED]
- Disinfects, Sanitizes, and deodorizes around the house
- Cleans and disinfects
- Brightens Laundry
- Safe for all your bleachable wash loads
- Whitens bleachable fabric
- For use in High Efficiency washing machines
- Whitens Whites
- Kills Virus that causes Flu
- [REDACTED]

[The Directions for Use on the following pages are similar directions with different formats and quantities in order to provide flexibility to distributors to address their customers' and market needs on labeling for the marketplace.]

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 this product 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 specific 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, Mohair and non-fast colors. Sort laundry by color and fabric. Separate whites from colors, light colors from dark colors.

BLEACH TEST: Before using, mix two tablespoons of bleach with ¼ 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. Test all colors, including trim. Let stand one minute, then blot dry. No color change means the article can be bleached safely.

LAUNDRY: Before adding clothes, mix ¾ 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. For large top loading automatics or larger heavily soiled loads, 1 1/8 cup. Add clothes. If sanitization 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.

TOP LOAD AUTOMATIC....3/4 CUP

LARGE TOP LOADING

AUTOMATIC...1 1/8 CUP

FRONT LOAD AUTOMATIC...1/3 CUP

LARGE/HEAVY SOILED

LOADS...1 1/8 CUP

REMOVE STAINS: Mix ¼ cup of bleach with a gallon of water. Soak stained are for 5 minutes to remove grass, ink, coffee, tea, scorch, fruit, etc. Rinse thoroughly.

LAUNDRY USE:**STANDARD WASHER – ¾ CUP****EXTRA LARGE WASHER – 1 ¼ CUP**

Sort laundry by color. If uncertain about dye colorfastness, test fabric by applying 1 drop of a solution made of 2 teaspoons of this product plus ¼ cup water to hidden part of seam. Be sure to check All colors. After 1 minute, blot dry. No color change means the article can be safely bleached. Avoid bleaching wool, silk, mohair, leather, spandex, and non-fast colors.

1. Sort laundry by color.
2. Add ¾ cup of this product or 1 ¾ cups for extra large washer.
3. Add detergent with the wash water before laundry is put in.

To hand wash, disinfect or pre-treat stains and clean heavy soils, rinse to remove loose soil and fully soak each garment for 5 minutes in a solution of ¼ cup of this product to 1 gallon of cool water.

To disinfect or sanitize laundry, add 1 cup of this product to a standard size washer following the laundry use directions.

To disinfect and deodorize diapers in pails, soak ¼ cup of this product to 1 gallon of water for 5 minutes.

[OR: the following format may be used:]

LAUNDRY USE:

1. Before adding clothes, mix ¾ 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. For larger top loading automatics or larger heavily soiled loads, use 1 1/8 cup.
2. Add clothes.
3. Wash and rinse with usual cycles.

Do not use on Acetate, Leather, Silk, Spandex or Wool, Mohair and non-fast colors.

REMOVE STAINS:

1. Mix ¼ cup of bleach with a gallon of water.
2. Soak stained area for 5 minutes to remove grass, ink, coffee, tea, scorch, fruit, etc.
3. Rinse thoroughly.

Kitchen: Clean and disinfect countertops and sinks [*or* Clean, disinfect, and eliminate mildew on countertops and sinks]:

1. Use ¾ cup of Pure Bright Germicidal Ultra Bleach [*or* this product] per gallon of water.
2. Wash and rinse surfaces then apply disinfecting solution.
3. Let stand 5 minutes.
4. Rinse thoroughly.

GENERAL HOUSEHOLD CLEANING:**DISINFECTING****HOUSEHOLD USE DIRECTIONS:**

Kitchen: refrigerators, work surfaces, garbage disposals, freezers, sinks, appliances, plastic laminate, stoves, stovetops, countertops, (ceramic) tile (floors or countertops), vinyl, linoleum, solid surface countertops, glass, garbage cans, trash cans, trash compactors, dish cloths, brushes, synthetic sponges, mops, latex enamel, painted woodwork, walls, faucets.

This product can be used on hard non-porous surfaces in commercial, institutional, hospital and household premises. Including kitchens, bathrooms, nurseries, laundry rooms, schools, restrooms, bathrooms, kitchens, kennels, veterinary offices, office buildings, offices, homes, food processing plants/facilities, animal husbandry, animal care facilities, meat processing plants, attics, closets, churches, storage areas, universities, institutions, military installations, patient rooms, dorms, shelters, laboratories, medical clinics, play areas, school buses, toilet areas, sick rooms, locker room facilities, eating establishments, pet kennels, veterinary premises, farms, dairies, and food processing plants.

Disinfecting and Deodorizing Bathrooms [or Disinfecting, Deodorizing, and eliminating Mildew in Bathrooms]: Disinfect and deodorize bathtubs, showers, sinks, floors, vinyl, tile.

1. Prewash surfaces and rinse.
2. Spread a solution of $\frac{3}{4}$ cup of Pure Bright Germicidal Ultra Bleach [or this product] per 2 gallons of water.
3. Let stand 5 minutes, then drain and air dry.

Toilet bowls: Sanitize and deodorize toilet

1. Prewash toilet and flush.
2. Pour $\frac{1}{2}$ cup of Pure Bright Germicidal Ultra Bleach [or this product] – swab with brush, making sure to get under the rim.
3. Let stand 10 minutes and flush. DO NOT use with bowl cleaners or any other household chemicals.

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 Tbsp. 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: [1.] Use $\frac{1}{4}$ cup bleach mixed with a quart of water to soak cleaned dishes, teapot, cups, sinks, etc. for 5 minutes. [2.] 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. [3.] Let air dry.

[OR: the following format may be used:]

DISINFECTING [AND ELIMINATING MILDEW ON] WALLS, FLOORS, AND OTHER HARD INANIMATE SURFACES NOT IN DIRECT CONTACT WITH

FOOD: Prewash surfaces and rinse. Mix $\frac{3}{4}$ cup bleach per gallon of water. Spray, rinse, or wipe surface with bleach solution and let stand for 5 minutes. Drain and air dry.

SANITIZING TOILET BOWL: Prewash toilet and flush. Pour $\frac{1}{2}$ cup bleach into toilet bowl, scrub with a brush, making sure to get under the rim, let stand 10 minutes, flush. Do not use with bowl cleaners or any other household chemicals.

DEODORIZING GARBAGE CANS: Wash and rinse. Use $\frac{3}{4}$ 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 a potable rinse. The solution should not be re-used to sanitize eggs.

One Tbsp. (1/2 ounce) of Pure Bright Germicidal Ultra Bleach [or this product] 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 conception.

[OR: the following format may be used:]

Bathroom: Bathtubs, urinals, faucets, showers, shower curtains, shower walls, shower doors, potty seats, sinks, countertops, porcelain, cat litter boxes, combs and brushes, and mold and mildew removal.

Baby's Nursery: Toys, changing tables, painted cribs, high chairs, plastic mattress covers, bumpers, and diaper pails.

Outdoors: Removes mold, moss, and mildew on/from outdoor siding, tile, brick, stucco, and patio stone, finished woodwork (decks, fences, arbors, trellises, benches, and patio furniture), and golf balls. Also on flower pots and planters. For heavy soil, pre-clean surface before disinfecting.

Disinfecting:

Use 1 cup of this product per gallon of water. Wash, wipe, or rinse items with water, then apply bleach solution. Let stand 10 minutes. Rinse thoroughly and air dry.

Toilet Bowls and/or Bidets: Flush toilet/bidet. Pour 1 ¼ cup of this product into the bowl. Brush entire bowl including under the rim with a scrub brush or mop; let stand 10 minutes before brushing again.

Litter Boxes: Remove litter. Wash box in soap/water. Fill with 1 cup of this product per gallon of water. Let stand 10 minutes. Rinse with clean water. (Let dry).

SANITIZING:

Food Contact Surface: refrigerators, freezers, plastic cutting boards, stainless cutlery, dishes, glassware, counter tops, pots and pans, stainless utensils –Use approximately 1 tablespoon of this product per gallon of water to prepare 200 ppm available chlorine solution; use chlorine test strips to determine exact available chlorine concentration. Wash, wipe or rinse items with detergent and water, then apply sanitizing –or- bleach solution. Let stand 2 minutes. Rinse all surfaces with a solution of 1 tablespoon of this product per gallon of water. Do not rinse or soak equipment overnight.

DO NOT USE ON STEEL, ALUMINUM, SILVER OR CHIPPED ENAMEL.

This product is not to be used as a terminal sterilant/high level disinfectant or any surface or instrument that (1) is introduced directly to 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.

FOR SANITIZING – Mix 1 Tbsp bleach with 1 Gallon of water.

Work Surfaces: Pre-wash with detergent, rinse, cover surface with bleach solution for at least 2 minutes, drain, let air dry.

Dishes, Glassware, Utensils: After washing, soak for at least 2 minutes in bleach solution. Drain and let air dry.

Bathtubs, Showers: Wash, rinse, apply bleach solution for at least 2 minutes, drain, let air dry.

Refrigerators, Freezers: Wash, rinse, apply bleach solution for at least 2 minutes, drain, let air dry.

FOR DISINFECTING – Mix ¾ Cup bleach with 1 Gallon of water.

Floors, Walls: Pre-wash surfaces and rinse. Spray, rinse or wipe surface with bleach solution, let stand for 5 minutes. Drain and air dry.

Mops, Brushes, Brooms, Rags: Wash with detergent, apply bleach solution, soak at least 10 minutes. Rinse well.

FOR MOLD AND MILDEW – Mix ¾ Cup bleach with 1 Gallon of water.

Bathrooms and Kitchens: Pre-wash with detergent, rinse, cover surface with bleach solution for at least 5 minutes, drain, let air dry. Food contact surfaces must be rinsed with potable water before use.

FOR DEODORIZING- Pour 1 Cup bleach in drain.

Drains: Pour into drain. Flush with hot water.

FOR BLEACHING/WHITENING – Mix ½ Cup with 1 Gallon of water.

Wooden Surfaces: Apply for 5 minutes, rinse.

FOR STAIN REMOVAL – Mix ½ Cup with 1 Gallon of water.

All Surfaces: Add bleach to detergent solution, apply, rinse.

- **Laundering:** To bleach and sanitize white and colorfast cotton, linen, nylon, Dacron, Orlon, polyester, Dynel and rayon in washing machine: $\frac{3}{4}$ cup of this product per load for conventional washing machine; $\frac{1}{2}$ cup for front load automatic. Add to pre-soak, wash water or final 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 grey; 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 stains. Make solutions of 2 tablespoons of this product to each quart of 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 – $\frac{3}{4}$ cup per load. Wringer-type washers – $\frac{3}{4}$ cup per load. Front-load automatics – $\frac{1}{2}$ 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, [1.] Spread a solution of 1 $\frac{1}{2}$ cups of this product per 2 gallons of water on clean surface. [2.] Let stand 5 minutes, then drain.
- **Toilet Bowls:** To sanitize and deodorize pre-cleaned toilet bowls, use $\frac{1}{2}$ cup of this product. [1.] Flush, pour in bleach – swab with brush, making sure to get under the rim, and [2.] let stand for 10 minutes. [3.] Flush. DO NOT use with bowl cleaners or any other household chemicals.
- **Sickroom Equipment:** Wash thoroughly with warm soapy solution. Rinse then spread a solution of 1 $\frac{1}{2}$ cups of this product per 2 gallons of water over all surfaces. Let stand 5 minutes, then drain.
- **Garbage cans:** Wash thoroughly with warm soapy solution. Rinse then spread a solution of 1 $\frac{1}{2}$ cups of this product per 2 gallons of water over all surfaces. Let stand 5 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 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 ozs.) 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 available chlorine solution. Do not rinse with water and do not soak equipment overnight.

PROPORTIONS FOR DILUTION OF THIS PRODUCT

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

600 ppm: 3 oz. (6 Tbsp) in 2 ½ gallons of water

(Use a chlorine test kit to determine exact available chlorine concentration and adjust dosage as necessary.)

RESTAURANTS, TAVERNS, SODA FOUNTAINS, DAIRIES, [REDACTED]

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.

[The Directions for Use on the following pages are similar directions with different formats and quantities in order to provide flexibility to distributors to address their customers' and market needs on labeling for the marketplace.]

DIRECTIONS FOR USE

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

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

STORAGE AND DISPOSAL

Store this product in a cool dry area, away from direct sunlight and heat to avoid deterioration. In case of spill, flood areas with large quantities of water. Product or rinsates that cannot be used should be diluted with water before disposal in a sanitary sewer. Do not reuse container but place in trash collection. Do not contaminate food or feed by storage, disposal or cleaning of equipment.

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.

To maintain the pool, add manually or by a feeder device 213 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.

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 reenter pool until the chlorine residual is between 1.0 to 3.0 ppm.

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

WINTERIZING POOLS – While water is still clear & clean, apply 6.4 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 107 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 107 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 6.4 oz. of product daily per 1000 gallons of water to maintain a 3 ppm chlorine concentration.

HUBBARD AND IMMERSION TANKS – Add 5 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 5 oz. to a bucket of water and circulate this solution through the agitator of the tank for 15 minutes and then rinse out the solution. Clean tank thoroughly and dry with clean cloths.

HYDROTHERAPY TANKS – Add 2.1 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 2.1 oz. of this product with 10 gallons of water. If no test kit is available, prepare a sanitizing solution by thoroughly mixing 4.25 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 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 2.1 oz. of this product with 10 gallons of water. If no test kit is available, prepare a sanitizing solution by thoroughly mixing 4.25 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 4.25 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 insure contact with all internal surfaces. Remove some cleaning solution from drain valve and test with a chlorine test kit. Repeat entire cleaning/sanitizing process if effluent contains less than 50 ppm available chlorine.

CLEAN-IN-PLACE METHOD – Thoroughly clean equipment after use. Prepare a volume of a 200 ppm available chlorine sanitizing solution equal to 110% of volume capacity of the equipment by mixing the product in a ratio of 4.25 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 insure contact with all internal surfaces. Remove some cleaning/sanitizing process if effluent contains less than 50 ppm available chlorine.

SPRAY/FOG METHOD – Preclean all surfaces after use. Use a 200 ppm available chlorine solution to control bacteria, mold or fungi and a 600 ppm solution to control bacteriophage. Prepare a 200 ppm sanitizing solution of sufficient size by thoroughly mixing the product in a ratio of 4.25 oz. product with 10 gallons of water. Prepare a 600 ppm solution by thoroughly mixing the product in a ratio of 12.8 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 a 600 ppm solution with a 200 ppm solution.

SANITIZATION OF POROUS FOOD CONTACT SURFACES

RINSE METHOD – Prepare a 600 ppm solution by thoroughly mixing 12.8 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 4.25 oz. of this product with 10 gallons of water. Prior to using equipment, rinse all surfaces with a 200 ppm available chlorine solution. Do not rinse and do not soak equipment overnight.

IMMERSION METHOD – Prepare a 600 ppm solution by thoroughly mixing, in an immersion tank, 12.8 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 4.25 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 and do not 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 the product in a ratio of 12.8 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 4.25 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 4.25 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, 4.25 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 the product in a ratio of 4.25 oz. product with 10 gallons of water. Use spray or fogging equipment which can resist hypochlorite solutions. Prior to using equipment, thoroughly spray or fog all surfaces until wet, allowing excess sanitizer to drain. Vacate area for at least 2 hours.

DISINFECTION OF NONPOROUS NON-FOOD CONTACT SURFACES

RINSE METHOD – Prepare a disinfecting solution by thoroughly mixing 12.8 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, 12.8 oz. of this product with 10 gallons of water to provide approximately 600 ppm available chlorine by weight. Clean equipment in this 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 12.8 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, 12.8 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 ration of 12.8 oz. of this product with 10 gallons of water. Use spray or fogging equipment which can resist hypochlorite solutions. Always empty and rinse spray/fog equipment with potable water after use. Prior to using equipment, thoroughly spray or fog all surfaces until wet, allowing excess sanitizer to drain. Vacate area for at least 2 hours.

SEWAGE & WASTEWATER EFFLUENT TREATMENT

The disinfection of sewage effluent must be evaluated by determining the total number of coliform bacteria and/or fecal coliform bacteria, as determined by the Most Potable Number (PMN) 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 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 21.3 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 3.2 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 SYSTEMS)

PUBLIC SYSTEMS: Mix a ratio of 2.1 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) was 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 2.1 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 2.1 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 SYSEMS: 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 water for 1 minute is not practical, water can be made potable by using this product. Prior to addition of the sanitizer, remove all suspended material by filtration or by allowing it to settle to the bottom. Decant the clarified, contaminated water to a clean container and add 1 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 for several times.

PUBLIC WATER SYSTEMS

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

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

NEW TANKS, BASINS, ETC. – Remove all physical soil from surfaces. 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 10.7 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 10.7 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 10.7 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 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 10.7 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 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 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 10.7 oz. of this product for each 10 gallons of water. During the filling of the containers, does 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 of time. When chlorination is completed, the system must be flushed free of all heavily chlorinated water.

COOLING TOWER/EVAPORATE 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 21.3 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 blowdown.

Subsequent Dose: When microbial control is evident, add 21.3 oz. of this product per 10,000 gallons of water in the system to obtain a 1 ppm residual. Apply half (or 1/3, 1/4, or 1/5) of this initial dose when half (or 1/3, 1/4, or 1/5) of the water in the system has been lost by blowdown. Badly fouled systems must be cleaned before treatment is begun.

CONTINUOUS FEED METHOD – Initial Dose: When system is noticeably fouled, apply 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 2.1 oz. of this product per 1,000 gallons of water lost by blowdown to maintain a 1 ppm residual. Badly fouled systems must be cleaned before treatment is begun.

BRIQUETTES OR TABLETS – Initially slug dose the system with 52 oz. of this product per 10,000 gallons of water in the system. Badly fouled systems must be cleaned before treatment is begun.

Subsequent Dose: When microbial control is evident, add 21.3 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.

LAUNDRY SANITIZERS

Household Laundry Sanitizers

IN SOAKING SUDS – Thoroughly mix 4.25 oz. of this product to 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 starting the wash/rinse cycle.

IN WASHING SUDS – Thoroughly mix 4.5 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 Sanitizers

Wet fabrics or clothes should be spun dry prior to sanitization. Thoroughly mix 4.5 oz. of this product with 10 gallons of water to yield 200 ppm available chlorine. Promptly after mixing the sanitizer, add the solution into the prewash prior to washing fabrics/clothes in the regular wash cycle with a good detergent. Test the level of available chlorine 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 21.3 oz. of this product with 10 gallons of water. Immerse all halters, ropes and other types of equipment used in handling and restraining animals or poultry, as well as the cleaned forks, shovels and scrapers used for removing litter and manure. Ventilate buildings, cars, boats, and other closed spaces. Do not house livestock or poultry or employ equipment until chlorine has been dissipated. All treated feed racks, mangers, troughs, automatic feeders, fountains and watered 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 21.3 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 blowdown.

Subsequent Dose: When microbial control is evident, add 11 oz. of this product per 10,000 gallons of water in the system to obtain a 1 ppm residual. Apply half (or 1/3, 1/4, or 1/5) of this initial dose when half (or 1/3, 1/4, or 1/5) of the water in the system has been lost by blowdown. Badly fouled systems must be cleaned before treatment is begun.

CONTINUOUS FEED METHOD – Initial Dose: When system is noticeably fouled, apply 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 2.1 oz. of this product per 1,000 gallons of water lost by blowdown to maintain a 1 ppm residual. Badly fouled systems must be cleaned before treatment is begun.

BRIQUETTES OR TABLETS – Initially slug dose the system with 107 oz. of this product per 10,000 gallons of water in the system. Badly fouled systems must be cleaned before treatment is begun.

Subsequent Dose: When microbial control is evident, add 21.3 oz. of this product per 10,000 gallons of water in the system daily, or as needed to maintain control and keep the chlorine residual at 1 ppm. Badly fouled systems must be cleaned before treatment is begun.

AGRICULTURAL USES

POST-HARVEST PROTECTION – Potatoes can be sanitized after cleaning and prior to storage by spraying with a sanitizing solution at a level of 1 gallon of sanitizing solution per tons of potatoes. Thoroughly mix 2.1 oz. of this product to 2 gallons of water to obtain 500 ppm available chlorine.

 Disinfectant leafcutting bee cells and bee boards by immersion in a solution containing 1 ppm available chlorine for 3 minutes. Allow cells to drain for 2 minutes and dry for 4 to 5 hours or until no chlorine odor can be detected. This solution is made by thoroughly mix 1 Tsp. of this product to 100 gallons of water. The bee domicile is disinfected by spraying with a 0.1 ppm solution until all surfaces are thoroughly wet. Allow the domicile to dry until all chlorine odor has dissipated.

FOOD EGG SANITIZATION – Thoroughly clean all eggs. Thoroughly mix 4.25 oz. of this product with 10 gallons of warm water to product a 200 ppm available chlorine solution. The sanitizer temperature should not exceed 130° F. Spray the warm sanitizer so that the eggs are thoroughly wetted. Allow the eggs to thoroughly dry before casing or breaking. Do not apply a potable water rinse. The solution should not be re-used to sanitize eggs.

FRUIT & VEGETABLE WASHING – Thoroughly clean all fruits and vegetables in a wash tank. Thoroughly mix 10.7 oz. of this product in 200 gallons of water to make a sanitizing solution of 25 ppm available chlorine. After draining the tank, submerge fruit or vegetables for 2 minutes in a second wash tank containing the recirculating sanitizing solution. Spray rinse vegetables with the sanitizing solution prior to packing. Rinse fruit with potable water only 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 4.25 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 12,000 oz. of this product to 10,000 gallons of water to obtain at least 600 ppm available chlorine. Apply so that all barrows, gates, rock and dam are treated with product. Permit high tide to fill the pond and then close gates. Allow water to stand for 2 to 3 days until the available chlorine level reaches zero. Open gates and allow 2 tidal cycles to flush the pond before returning lobsters to pond.

CONDITIONING LIVE OYSTERS – Thoroughly mix 10.7 oz. of this product to 10,000 gallons of water at 50 to 70° 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° F.

CONTROL OF SCAVENGERS IN FISH HATCHERY PONDS – Prepare a solution containing 200 ppm of available chlorine by mixing 4.25 oz. of product with 10 gallons of water. Pour into drained potholes. Repeat if necessary. Do not put desirable fish back into refilled ponds until chlorine residual has dropped to 0 ppm, as determined by as test kit.

SANITIZATION OF DIALYSIS MACHINES

Flush equipment thoroughly with water prior to using this product. Thoroughly mix 12.8 oz. of this product to 10 gallons of water to obtain at least 600 ppm available chlorine. Immediately use this product in the hemodialysate system allowing for a minimum contact time of 15 minutes at 20° C. Drain system of the sanitizing solution and thoroughly rinse with water. Discard and DO NOT reuse the spent sanitizer. Rinsate must be monitored with a suitable test kit to 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, bactericide, pseudomonicide) when tested by AOAC and EPA test methods. This product may not totally eliminate all vegetative microorganisms in hemodialysate delivery systems due to their construction and/or assembly, but can be relied upon to reduce the number of microorganisms to acceptable levels when used as directed. This product should be used in a disinfectant program which includes bacteriological monitoring of the hemodialysate delivery system. This product is NOT recommended for use in hemodialysate or reverse osmosis (RO) membranes.

Consult the guidelines for hemodialysate systems which 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 10.7 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 37.3 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 10.7 oz. of this product per 10 gal. of water at frequent intervals. Small areas can be sprinkled with a watering can.

TOILET BOWL SANITIZERS

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

[Claims are limited to sanitization. No claims for disinfection are permitted.]