9616-7 12/9/2014 1/20

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

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

Robert R. Brennis
Agent for Vortex Chemical Corporation
Brennis Consulting Services
5405 Echols Ave.
Alexandria, VA 22311

DEC 9 2014

SUBJECT: Product Name: Vertex CSS-12
EPA Registration Number: 9616-7
Application Date: August 11, 2014
Application Received Date: August 15, 2014

Dear Mr. Brennis:

This acknowledges the receipt of your Label Amendment application dated August 11, 2014 in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended. Based on a review of the submitted material, the following apply:

Proposed Amendment:

- Label Amendment for VERTEX CSS-12 (EPA Reg. No. 9616-7) to include some additional language for condenser water treatment - used to treat SWEET or COW (e.g. condensate of whey) collected from evaporated condensing water systems in food and dairy plants.

General Comments:

- Based on the review of the submitted material, **Label Amendment** to revise the label to include some additional language for condenser water treatment - used to treat SWEET or COW (e.g. condensate of whey) collected from evaporated condensing water systems in food and dairy plants is **Acceptable**. A copy of the **accepted** Label Amendment is attached in **Regulatory File Jacket** 9616-7 for future reference. This labeling supersedes all previously accepted labeling. The next label printing of this Product must use this labeling unless subsequent changes have been approved. You must submit one (1) copy of the final printed labeling before your release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this Product under previously approved labeling for 18 months from the data of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell' is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

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This information has been made a part of your file. If you have questions or comments with regard to this Agency Letter, please contact Srinivas Gowda via email at gowda.srinivas@epa.gov or call 703-308-6354.

Sincerely yours,

Demson Fuller
EPA Product Manager 32
Regulatory Management Branch II
Antimicrobials Division 7510P

Enclosure: Accepted Stamped Label

VERTEX CSS-12®

A SODIUM HYPOCHLORITE SOLUTION FOR SANITIZATION IN THE DAIRY, FOOD PROCESSING, FOOD SERVICE, AND WATER TREATMENT INDUSTRIES POOL SHOCK AND ALGAE CONTROL IN SWIMMING POOLS, WATER TREATMENT, PUBLIC WATER SUPPLIES AND WASTE WATER SYSTEMS.

ACTIVE INGREDIENT:	
SODIUM HYPOCHLORITE	12.5%
OTHER INGREDIENTS	87.5%
TOTAL	100.0%

ACCEPTED
12/09/2014
Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 9616-7

UN1791, Hypochlorite Solution, 8 Corrosive Material, PGIII

KEEP OUT OF REACH OF CHILDREN

DANGER

FIRST AID STATEMENT

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 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 further treatment advice.

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 swallowed:
- Call a poison control center or doctor immediately for further treatment advice.
- Have person sip a glass of water if able to swallow.
- Do not induce vomiting unless told to do so by poison control center or doctor.
- Do not give anything by mouth to an unconscious person.

HOT LINE NUMBER

Have the product container or label with you when calling a poison center or doctor, or going for treatment. Contact 1-800-222-1222 for emergency medical treatment information.

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

See Back Panel for Additional Precautionary Statements.

Transport upright never in passenger area. Protect rugs or upholstery.

CONTENTS: 1 GALLON (3.78L), 96 FL. OZ. , 2.5 GALLONS (9.46L) , 3 GALLONS, 4 GALLONS (15.14L), 5 GALLONS (18.92L), 15 GALLON (56.77L), 30 GALLON, 50 GALLON (189.25L), 55 GALLON (208.17L), 220 GALLON, 250 GALLON, 275 GALLON, 300 GALLON, 320 GALLON, 330 GALLON

EPA REG. NO 9616-7 EPA EST. 9616-IL-1;IA-1;TN-1

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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. Do not get in eyes, on skin or clothing. Wear safety glasses or goggles and rubber gloves when handling this product. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse. Avoid breathing vapors. Vacate poorly ventilated areas as soon as possible. Do not return until odors have dissipated.

PHYSICAL AND 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 irritating to eyes, lungs, and mucous membranes.

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 other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

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:

Do not contaminate water, food or feed by storage, disposal or cleaning of equipment.

VERTEX CSS-12 STORAGE: 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, in accordance with state & local regulations. **VERTEX CSS-12 DISPOSAL:** To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

CONTAINER HANDLING: (HOUSEHOLD & RESIDENTIAL USE LABELS) (marketing label will include only applicable container handling instructions) **NONREFILLABLE CONTAINER–DO NOT reuse or refill this container.** Securely wrap original container in several layers of newspaper and discard in trash or offer for recycling if available. DO NOT PUNCTURE CONTAINER!

CONTAINER HANDLING: (ALL OTHER LABELS) (marketing label will include only applicable container handling instructions) (When check-off box format is used on label, filler will mark appropriate box.)

☐ **NONREFILLABLE CONTAINER–DO NOT reuse or refill this container.** Clean container promptly after emptying. To clean container: fill container ¼ full with water. Replace the closure or plug the opening of the container. Rotate the container, making sure to rinse all surfaces. Turn the container upside down. Add the rinsate to the application equipment or mix tank or store rinsate for later use or disposal. Allow 30 seconds for rinsate to drain. Repeat this procedure two more times. Offer container for recycling if available or dispose of in a sanitary landfill, or by other procedure allowed by state & local authorities.

☐ **REFILLABLE CONTAINER–Refill this container with VERTEX CSS-12 only.** Do not reuse this container for any other purpose. Clean container promptly after emptying. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean container: fill container ¼ full with water. Replace the closure or plug the opening of the container. Rotate the container, making sure to rinse all surfaces. Turn the container upside down. Add the rinsate to the application equipment or mix tank or store rinsate for later use or disposal. Allow 30 seconds for rinsate to drain. Repeat this procedure two more times. Offer container for recycling if available or dispose of in a sanitary landfill, or by other procedure allowed by state & local authorities.

DAIRY FARMS - Use 200 ppm solution of VERTEX CSS-12. See Table of Proportions and Instruction Sheet.

FARM PREMISES - See Instruction Sheet.

FOOD AND DAIRY - After cleaning & potable water rinse, and before use, sanitize all nonporous surfaces with 200 ppm VERTEX CSS-12 for two minutes. For all porous surfaces clean all surfaces in the normal manner. Rinse all surfaces thoroughly with the 600 ppm solution maintaining contact for at least two minutes. Prepare a 200 ppm sanitizing solution. Prior to using equipment, rinse all surfaces with a 200 ppm available chlorine solution. Do not rinse. See Table of Proportions. Surfaces must be adequately drained prior to contact with food. Allow to air dry. See Instruction Sheet. For mold control of nonporous surfaces a spray rinse of 200 ppm is recommended. See Instruction Sheet. See Table of Proportions.

RESTAURANTS AND TAVERNS - After washing with dishwashing detergent and rinsing with potable water, immerse utensils in 200 ppm solution of VERTEX CSS-12 for at least 2 minutes. Allow utensils to air dry. See Instruction Sheet

MACHINE DISHWASHING TERMINAL RINSE SANITATION - As a terminal sanitizing rinse for precleaned food utensils, adjust automatic dispensing equipment to provide a use solution of 100 to 200 ppm available chlorine according to requirements of Public Health Authorities. Use solution should be tested frequently with a suitable chlorine test kit to ascertain that the rinsate strength does not fall below 50 ppm. In the absence of a test kit a starting concentration of 200 ppm should be used. See Table of Proportions. See Instruction Sheet.

BOTTLES - After cleaning with potable water and immediately before filling, sanitize precleaned bottles with a 100 ppm available chlorine solution for two minutes (see Table of Proportions). In the absence of a test kit to measure available chlorine to determine if rinsate has fallen below 50 ppm during use, a starting concentration of 200 ppm should be used. Allow thorough draining and air dry. See Instruction Sheet.

EGG WASHING - Use a 240 ppm solution of VERTEX CSS-12. See Instruction Sheet. See Table of Proportions.

EGG SANITIZING - Use a 200 ppm solution of VERTEX CSS-12. See Instruction Sheet. See Table of Proportions.

EGG DESTAINING - Use a 250 ppm solution of VERTEX CSS-12. See Instruction Sheet. See Table of Proportions.

FRUIT AND VEGETABLE WASHING - Pre-rinse fruits and vegetables with water to remove soil materials and then thoroughly clean in a wash tank. Soak or spray fruits and vegetables with a 25 ppm chlorine solution. See Table of Proportions. See Instruction Sheet.

COOLING TOWER / CONDENSER WATER - See Instruction Sheet.

SWIMMING POOL WATER DISINFECTION – (SHOCK TREATMENT-)For a new pool or spring start-up, superchlorinate to yield 5 to 10 ppm available chlorine by weight. Check the level of available chlorine with a test kit. Adjust and maintain pool water pH to between 7.2 and 7.6. Adjust and maintain the alkalinity of the pool to between 50 to 100 ppm. (See Table of Proportions)

(POOL MAINTENANCE-) To maintain the pool, add manually or by a feeder device to yield an available chlorine residual between 0.6 to 1.0 ppm by weight. 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. (See Table of Proportions)

Every 7 days, or as necessary, superchlorinate the pool 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 4.0 ppm. Re-entry into treated pools is prohibited above levels of 4 ppm due to risk of bodily harm. (See Table of Proportions)

WINTERIZING POOLS - While water is still clear & clean, obtain while filter is running 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 manufacurers' instructions. (See Table of Proportions)

SPAS, HOT TUBS, IMMERSION TANKS, ETC. - See Instruction Sheet.

HUBBARD AND IMMERSION TANKS, ETC - See Instruction Sheet.

HYDRO THERAPY TANKS - See Instruction Sheet.

SEWAGE AND WASTEWATER EFFLUENT TREATMENT - See Instruction Sheet.

SEWAGE AND WASTEWATER TREATMENT - See Instruction Sheet.

DISINFECTION OF DRINKING WATER - (Emergency/Public/Individual Systems). See Instruction Sheet.

PUBLIC WATER SYSTEMS - See Instruction Sheet.

EMERGENCY DISINFECTION AFTER FLOODS - See Instruction Sheet.

EMERGENCY DISINFECTION AFTER FIRES - See Instruction Sheet.

EMERGENCY DISINFECTION AFTER DROUGHTS - See Instruction Sheet.

EMERGENCY DISINFECTION AFTER MAIN BREAKS - See Instruction Sheet.

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(proportions are only provided on the marketing label for those use sites that are used and include the requested ppm level)

TABLE OF PROPORTIONS – AVAILABLE CHLORINE

.2-.6 ppm – 1 fluid ounce per 2000 gallons water
1.0 ppm – 2 fluid ounces per 2500 gallons water
1 ppm - 1 fluid ounce per 1000 gallons water
1.5 ppm – 4 fluid ounces per 2500 gallons water
3.0 ppm – 3 fluid ounces per 1000 gallons water
4.0 ppm – 4 fluid ounces per 1000 gallons water
5.0 ppm – 5 fluid ounces per 1000 gallons water
10 ppm - 9 fluid ounces per 1000 gallons water
10.0 ppm – 22 fluid ounces per 2500 gallons water
15 ppm - 14 fluid ounces per 1000 gallons water

TABLE OF PROPORTIONS – AVAILABLE CHLORINE

25 ppm – 22 fluid ounces per 1000 gallons water
35 ppm – 31 fluid ounces per 1000 gallons water
50.0 ppm – 45 fluid ounces per 1000 gallons water
100.0 ppm – 1 fluid ounce per 10 gallons water
100 ppm - 89 fluid ounces per 1000 gallons water
200 ppm - 1 fluid ounce per 5 gallons water
200 ppm -178 fluid ounces per 1000 gallons water
240 ppm - 213 fluid ounces per 1000 gallons water
250 ppm – 222 fluid ounces per 1000 gallons water

TABLE OF PROPORTIONS – AVAILABLE CHLORINE

500 ppm – 5 fluid ounces per 10 gallons water
600 ppm – 533 fluid ounces per 1000 gallons water
800 ppm - 4 fluid ounces per 5 gallons water
800 ppm - 710 fluid ounces per 1000 gallons water
1000 ppm - 5 fluid ounces per 5 gallons water
1000 ppm - 888 fluid ounces per 1000 gallons water
5000 ppm -22 fluid ounces per 5 gallons water
10000 ppm -45 fluid ounces per 5 gallons water

Do not apply this product through any type of irrigation system.
This product is authorized by USDA for use in federally inspected meat and poultry plants.

STATE AND LOCAL REGULATIONS - consult your dealer, state or local health authorities for additional information.
Manufactured By VERTEX CHEMICAL CORPORATION, St. Louis, MO 63131

BATCH CODE:

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INSTRUCTIONS FOR APPLICATION OF VERTEX CSS-12

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SWIMMING POOL WATER DISINFECTION

(SHOCK TREATMENT:) For a new pool or spring start-up, superchlorinate (see table of proportions) 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.

(POOL MAINTENANCE:) To maintain the pool, add manually or by a feeder device (see table of proportions) 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 (see table of proportions) 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 4.0 ppm. Re-entry into treated pools is prohibited above levels of 4 ppm due to risk of bodily harm.

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, while filter is running, obtain a 3 ppm available chlorine residual (see table of proportions), 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: See table of proportions 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, see table of proportions to maintain a chlorine concentration of 5 ppm.

After each use, see table of proportions and apply product to raise to 16 ppm available chlorine to control odor and algae. Do not enter spa or tub until chlorine concentration is back to 5 ppm. Re-entry into treated pools is prohibited above levels of 5 ppm due to risk of bodily harm.

During extended periods of disuse, see table of proportions and add VERTEX CSS-12 to maintain a 3 ppm chlorine concentration.

HUBBARD & IMMERSION TANKS: See table of proportions 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. Prepare a bucket of water with 1000 ppm solution (see table of proportions) 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: See table of proportions 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.

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SANITIZING RINSE

FOOD AND DAIRY PROCESSORS: VERTEX CSS-12 may be used to sanitize all equipment, utensils, pipes, pans, tanks or flat surfaces which are hard nonporous and will not absorb sanitizer solution but which do come in contact with food products.

Use 200 ppm solution for two minutes for nonporous surfaces.

For effective sanitization, all surfaces must be wet thoroughly. Depending on equipment setup, immersion or flooding is best. A heavy spray is acceptable if properly applied to stationary equipment.

Gross food particles and soil must be removed by a pre-flush or pre-scrape as necessary prior to sanitizing.

Sanitizers for all surfaces not always requiring a rinse - Before using these compounds, food products and packaging materials must be removed from the room or carefully protected. A potable water rinse is not required following use of these compounds for sanitizing previously cleaned hard surfaces provided that the surfaces are adequately drained before contact with food so that little or no residue remains which can adulterate or have a deleterious effect on edible products. These compounds may be used for microbial control on ceilings, floors, and walls at concentrations considerably higher than those allowed for sanitizing food contact surfaces without a potable water rinse unless, in the opinion of the Inspector-In-Charge, such use may result in contamination of food products. A potable water rinse is required following use of these compounds under conditions other than those stated above. The compounds must always be used at dilutions (see table of proportions) and according to applicable directions provided on the EPA registered label.

Do not re-use solution. Provide fresh solution for each application.

DAIRY FARMS, RESTAURANTS AND TAVERNS: All equipment utensils, etc. to be sanitized must first be pre-scraped or pre-flushed, or if necessary pre-soaked in order to remove gross food particles, soil or other organic substances. A thorough washing with a compatible detergent is recommended, followed by potable water rinse prior to sanitization. Use 200 ppm solution for two minutes.

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. See table of proportions and prepare a 100 ppm solution. If no test kit is available, see table of proportions and prepare a sanitizing solution 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 (see table of proportions) 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 the available chlorine does not drop below 50 ppm. See table of proportions and prepare a 100 ppm sanitizing solution. If no test kit is available, see table of proportions and prepare 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. See table of proportions. 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.

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SANITIZATION OF NONPOROUS FOOD CONTACT SURFACES (cont'd)

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

SPRAY/FOG METHOD: Preclean all surfaces after use. Use a 200 ppm available chlorine solution to control bacteria, mold or fungi and a 600 ppm solution to control bacteriophage. 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. (See table of proportions.)

SANITIZATION OF POROUS FOOD CONTACT SURFACES

RINSE METHOD: See table of proportions and prepare a 600 ppm solution. 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. (See table of proportions.) 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: See table of proportions and prepare a 600 ppm solution. Clean equipment in the normal manner. Immerse equipment in the 600 ppm solution for at least 2 minutes. Prepare a 200 ppm sanitizing solution (see table of proportions) 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 overnight.

SPRAY/FOG METHOD: Preclean all surfaces after use. See table of proportions and prepare a 600 ppm available chlorine sanitizing solution of sufficient size. 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, see table of proportions and rinse all surfaces with a 200 ppm available chlorine solution.

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SANITIZATION OF NONPOROUS NON-FOOD CONTACT SURFACES

RINSE METHOD: See table of proportions and prepare a sanitizing solution 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: See table of proportions and prepare a sanitizing solution 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. See table of proportions and prepare a 200 ppm available chlorine sanitizing solution of sufficient size. 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: See table of proportions and prepare a disinfecting solution 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: See table of proportions and prepare a disinfecting solution in an immersion tank 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: See table of proportions and prepare a sanitizing solution 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: See table of proportions and prepare a sanitizing solution 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, see table of proportions. 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 Probable Number (MPN) procedure, of the chlorinated effluent has been reduced to or below the maximum permitted by the controlling regulatory jurisdiction.

On the average, satisfactory disinfection of secondary wastewater effluent can be obtained when the chlorine residual is 0.5 ppm after 15 minutes contact. Although the chlorine residual is the critical factor in disinfection, the importance of correlating chlorine residual with bacterial kill must be emphasized. The MPN of the effluent, which is directly related to the water quality standards requirements, should be the final and primary standard and the chlorine residual should be considered an operating standard valid only to the extent verified by the coliform quality of the effluent.

The following are critical factors affecting wastewater disinfection:

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

2. Contacting: Upon flash mixing, the flow through the system must be maintained.

3. Dosage/Residual Control: Successful disinfection is extremely dependent on response to fluctuating chlorine demand to maintain a predetermined, desirable chlorine level. Secondary effluent should contain 0.2 to 1.0 ppm chlorine residual after a 15 to 30 minute contact time. A reasonable average of residual chlorine is 0.5 ppm after 15 minutes contact time.

SEWAGE AND WASTEWATER TREATMENT

EFFLUENT SLIME CONTROL: Apply a 100 to 1000 ppm available chlorine solution at a location which will allow complete mixing. Prepare this solution by mixing 10 to 100 oz. of this product with 100 gallons of water. Once control is evident, apply a 15 ppm available chlorine solution. Prepare this solution by mixing 3 oz. of this product with 100 gallons of water.

FILTER BEDS SLIME CONTROL: Remove filter from service. Drain to a depth of 1 ft. above filter sand, and add product to obtain 500 ppm evenly over the surface. (See table of proportions.) 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)

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PUBLIC SYSTEMS: See table of proportions. Prepare a 10 ppm solution. Begin feeding this solution with a hypochlorinator until 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 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 (see table of proportions) using a stiff brush. 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. (See table of proportions.) Add 5 to 10 gallons of clean, chlorinated water to the well in order to force the sanitizer into the rock formation. Wash the exterior of pump cylinder with the sanitizer. Drop pipeline into well, start pump and pump water until strong odor of chlorine in water is noted. Stop pump and wait at least 24 hours. After 24 hours flush well until all traces of chlorine have been removed from the water. Deep wells with high water levels may necessitate the use of special methods for introduction of the sanitizer into the well. Consult your local Health Department for further details.

INDIVIDUAL WATER SYSTEMS FLOWING ARTESIAN WELLS: Artesian wells generally do not require disinfection. If analyses indicate persistent contamination, the well should be disinfected. Consult your local Health Department for further details.

EMERGENCY DISINFECTION: When boiling 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. Then add this product to make a 0.6 ppm solution (see table of proportions). 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. Use a 500 ppm available chlorine solution (see table of proportions). Fill to working capacity and allow to stand for at least 4 hours. Drain and flush with potable water and return to service.

NEW FILTER SAND: Apply 80 oz. of this product for each 150 to 200 cubic feet of sand. The action of the product dissolving as the water passes through the bed will aid in sanitizing the new sand.

NEW WELLS: Flush the casing with a 50 ppm available chlorine solution of water (see table of proportions). 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 using a solution of approximately 500 ppm available chlorine. (See table of proportions.) 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 approximately 1000 ppm available chlorine. After drying, flush with water and return to service.

EMERGENCY DISINFECTION AFTER FLOODS

WELLS: See table of proportions and thoroughly flush contaminated casing with a 500 ppm available chlorine solution. 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 services. If the previous method is not suitable, spray or flush the equipment with a solution containing 5 oz. of this product for each 5 gallons of water (1000 ppm available chlorine). Allow to stand for 2 to 4 hours, flush and return to services.

FILTERS: When the sand filter needs replacement, apply 80 oz. of this product for each 150 to 200 cubic feet of sand. When the filter is severely contaminated, additional product should be distributed over the surface at the rate of 80 oz. per 20 sq. ft. Water should stand at a depth of 1 foot above the surface of the filter bed for 4 to 24 hours. When filter beds can be backwashed of mud and silt, apply 80 oz. of this product per each 50 sq. ft., allowing the water to stand at a depth of 1 foot above the filter sand. After 30 minutes, drain water to the level of the filter. After 4 to 6 hours, drain and proceed with normal backwashing.

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

EMERGENCY DISINFECTION AFTER FIRES

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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 (see table of proportions) and rinse with potable water after 5 minutes. During the filling of the containers, dose with sufficient amounts of this product to provide at least 0.2 ppm chlorine residual. Use a chlorine test kit.

EMERGENCY DISINFECTION AFTER MAIN BREAKS

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

COOLING TOWER
FOR USE IN FEDERALLY INSPECTED MEAT AND POULTRY PLANTS

SLUG FEED METHOD: Initial dose: When system is noticeably fouled, see table of proportions and apply this product to obtain from 5 to 10 ppm available chlorine. Repeat until control is achieved.
Subsequent Dose: When microbial control is evident, add this product 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, see table of proportions and apply this product 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 this product as needed to to 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, see table of proportions and apply this product to obtain 5 to 10 ppm available chlorine in system water.
Subsequent Dose: See table of proportions and maintain this treatment level by starting a continuous feed of water lost by blowdown to maintain a 1 ppm residual. Badly fouled systems must be cleaned before treatment is begun.

EVAPORATIVE CONDENSER WATER
FOR USE IN FEDERALLY INSPECTED MEAT AND POULTRY PLANTS

(This product may be used to treat SWEET or COW (e.g. Condensate of whey) collected from evaporated or condensing water systems in food and dairy plants)

SLUG FEED METHOD: Initial dose: When system is noticeably fouled, see table of proportions and apply this product to obtain from 5 to 10 ppm available chlorine. Repeat until control is achieved.
Subsequent Dose: When microbial control is evident, add this product 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, see table of proportions and apply this product 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 this product as needed to 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, see table of proportions and apply this product to obtain 5 to 10 ppm available chlorine in system water.
Subsequent Dose: See table of proportions and maintain this treatment level by starting a continuous feed of water lost by blowdown to maintain a 1 ppm residual. Badly fouled systems must be cleaned before treatment is begun.

LAUNDRY SANITIZERS

Household Laundry Sanitizers

IN SOAKING SUDS - See table of proportions and provide 200 ppm available chlorine solution. Wait 5 minutes, then add soap or detergent. Immerse laundry for at least 11 minutes prior starting the wash/rinse cycle.

IN WASHING SUDS - See table of proportions and add sufficient product to 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 sufficient proportion of this product with 10 gallons of water to yield 200 ppm available chlorine (see table of proportions). 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.

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 (see table of proportions). Immerse all halters, ropes and other types of equipment used in handling and restraining animals or poultry, as well as the cleaned forks, shovels and scrapers used for removing litter and manure. Ventilate buildings, cars, boats and other closed spaces. Do not house livestock or poultry or employ equipment until chlorine has been dissipated. All treated feed racks, mangers, troughs, automatic feeders, fountains and waterers must be rinsed with potable water before reuse.

PULP AND PAPER MILL PROCESS WATER SYSTEMS

SLUG FEED METHOD - Initial Dose: When system is noticeably fouled, see table of proportions and apply adequate proportions 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, see table of proportions and add adequate proportion 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, see table of proportions and apply adequate proportion 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, see table of proportions and add adequate proportion 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, see table of proportions and apply adequate proportion 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 this product (see table of proportions) per 1,000 gallons of water lost by blowdown to maintain a 1 ppm residual. Badly fouled systems must be cleaned before treatment is begun.

AGRICULTURAL USES

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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. See table of proportions and thoroughly mix an adequate proportion of this product to 2 gallons of water to obtain 500 ppm available chlorine.

Disinfect leafcutting bee cells and bee boards by immersion in a solution containing 1 ppm available chlorine for 3 minutes. Allow cells to drain for 2 minutes and dry for 4 to 5 hours or until no chlorine odor can be detected. This solution is made by thoroughly mixing this product (see table of proportions) 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.

FRUIT & VEGETABLE WASHING: Thoroughly clean all fruits and vegetables in a wash tank. See table of proportions and prepare a solution with 25 ppm available chlorine. After draining the tank, submerge fruit or vegetables for two minutes in a second wash tank containing the recirculating sanitizing solution with 25 ppm sanitizing solution. Spray rinse vegetables with the sanitizing solution prior to packaging. Rinse fruit with potable water only prior to packaging.

EGG SANITIZING

I. INSTRUCTION FOR EGG SANITIZING WITH VERTEX CSS-12.

The sanitizing solution recommended for use for shell egg sanitizing is a 200 ppm solution of VERTEX CSS-12. (See Table of Proportions.)VERTEX CSS-12 is not deleterious to shell eggs or egg-products.

II. RECOMMENDED PROCEDURES FOR WASHING & SANITIZING FOOD EGGS.

1. Wash eggs promptly after gathering.
2. Water with an iron content in excess of 2 parts per million shall not be used unless equipment capable of removing the excess iron is installed on the water system.
3. Wash water temperature should be 90°F or higher.
4. Maintain the wash water at a temperature which is at least 20°F warmer than the temperature of the eggs to be washed.
5. Spray rinse washed eggs with warm sanitizer so that the eggs are thoroughly wetted.The sanitizer temperature should not exceed 130° F.
6. Do not apply a potable water rinse.
7. Allow the eggs to thoroughly dry before casing or breaking.
8. Never reuse sanitizing/washing solution

EGG DESTAINING

I. INSTRUCTIONS FOR EGG DESTAINING WITH VERTEX CSS-12.

The destaining solution recommended for use for shell egg destaining is a 250 ppm solution of VERTEX CSS-12. (See Table of Proportions.) VERTEX CSS-12 is not deleterious to shell eggs or egg-products.

II. RECOMMENDED PROCEDURES FOR DESTAINING SHELL EGGS.

1. The destainer solution must be at least 20°F warmer than the shell eggs with a minimum solution temperature of 90°F.
2. Total elapsed time in the destainer solution may not exceed 5 minutes.
3. Eggs are to be rewashed and spray rinsed after destaining.
4. Destainer solution should be replaced daily or whenever it becomes dirty.
5. Destaining is to be done after the initial washing has been completed.
6. It is recommended that all eggs be shell protected after they have been destained.
7. Never reuse sanitizing/washing solution.

AQUACULTURAL USES

FISH PONDS - Remove fish from ponds prior to treatment. See table of proportions and thoroughly mix adequate proportion 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. See table of proportions and thoroughly mix an adequate proportion 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. See table of proportions and apply an adequate proportion 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 - See table of proportions and thoroughly mix an adequate proportion 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 an adequate proportion of this product (see table of proportions) 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 an adequate proportion of this product (see table of proportions) 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 vegatative 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, AZ 85021.

This product is not to be used as a terminal sterilant/high level disinfectant on any surface or instrument that (1) is introduced directly 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 preclean or decontaminate critical or semi-critical medical devices prior to sterilization or high level disinfection.

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. 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. See table of proportions and add an appropriate proportion 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 and adequate proportion of this product (see table of proportions) per 10 gal. of water at frequent intervals. Small areas can be sprinkled with a watering can.

WATER TREATMENT COMPOUNDS

FOOD PROCESSING PLANTS – PROCESS WATER

PROCESS WATER: Systems in establishments operating under the Federal Meat, Poultry, Shell Egg Grading and Egg Product Inspections Program. See table of proportions and treat poultry process water to a dosage of 5 ppm calculated as available chlorine. Chlorine may be used in poultry chiller intake water and in carcass wash water in poultry plants at levels up to 50 ppm calculated as available chlorine. Chlorine must be dispensed at a constant and uniform level and the method or system must be such that a controlled rate is maintained. Chlorine may be present in process water of meat plants at concentrations up to 5 parts per million calculated as available chlorine. Under reliable controls, the chlorine level may be increased in water used on meat carcasses up to 50 ppm.