3276-20002 9/5/2012 1/16

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

September 5, 2012

Nicole Damon
Regulatory Chemist
EXL Laboratories
1001 Glenwood Avenue
Minneapolis, MN 55405

Subject AL-CLOR 10
EPA Registration Number 3276-20002
Letter Date August 8, 2012
EPA Receipt Date August 17, 2012

Dear Mrs Damon

The following label amendment, submitted in connection with registration under section of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is acceptable with comment

Proposed Amendment

- Revised label per EPA letter dated June 12, 2012

General comments

Add the term ***"DANGER"*** at the end of the precautionary statement heading

A stamped accepted copy of the label with conditions is enclosed for your record

Submit one copy of your final printed labeling before distributing or selling this product bearing the revised labeling This amendment and a copy of this letter have been placed in the subject product's file for future reference

Sincerely,

Monisha Harris
Product Manager (32)
Regulatory Management Branch II
Antimicrobials Division (7510P)

Enclosure A copy of the stamped labeling

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AL-CLOR 10

DISINFECTANT, GERMICIDE, SANITIZER

EPA Reg No 3276 20002 EPA Est No 3276 MN 1

ACTIVE INGREDIENTS

Sodium Hypochlorite	10 0 /
Other Ingredients	90 0 %
TOTAL	100 0%

ACCEPTED
with COMMENTS
In EPA Letter Dated
SEP 5 2012
Under the Federal Insecticide Fungicide and Rodenticide Act as amended for the pesticide registered under EPA Reg No. 3276-20002

DANGER

KEEP OUT OF REACH OF CHILDREN

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CORROSIVE Causes irreversible eye damage and skin burns Do not get in eyes or on clothing Wear safety glasses or goggles protective clothing and rubber gloves when handling this product Avoid breathing vapors Vacate poorly ventilated area as soon as possible Do not return until strong odors have dissipated 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

FIRST AID

IF IN EYES

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

IF ON SKIN OR CLOTHING

Take off contaminated clothing
Rinse skin immediately with plenty of water for 15 – 20 minutes
Call a poison control center or doctor for treatment advice

IF SWALLOWED

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

IF INHALED

Move person to fresh air
If person is not breathing call 911 or an ambulance and then give artificial respiration preferably mouth to mouth if possible
Call a poison control center or doctor for further treatment advice
Have the product container or label with you when calling a poison control center or doctor or going for treatment

For emergency information on Al Clor 10 call the National Pesticides Information Center at **1 800 858 7378** 6 30 AM to 4 30 PM Pacific Time (PT) seven days a week During other times call the poison control center at **1 800 222 1222**

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 mucus 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 public waters unless this product is specifically identified and addressed in an NPDES permit Do not discharge effluent containing this product into sewer systems without previously notifying the sewage treatment plant authority For guidance contact your State Water Board or regional office of the EPA

STORAGE AND DISPOSAL

PESTICIDE STORAGE DO NOT CONTAMINATE WATER FOOD OR FEED BY STORAGE DISPOSAL OR CLEANING OF EQUIPMENT 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
PESTICIDE DISPOSAL Pesticide wastes may be hazardous Improper disposal is a violation of federal Law If these wastes cannot be disposed of by use according to label instructions contact your State Pesticide or Environmental Control Agency or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance **CONTAINER HANDLING** Non refillable Container Do not reuse or refill this container Offer for recycling if available Offer for reconditioning if appropriate
CONTAINER CLEANING Triple rinse or pressure rinse container (or equivalent) promptly after emptying
Small Containers
Triple rinse as follows Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip Fill the container / full with water and recap Shake for 10 seconds Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal Drain for 10 seconds after the flow begins to drip Repeat this procedure two more times
Large Containers
Triple rinse as follows Empty the remaining contents into application equipment or a mix tank Fill the container / full with water Replace and tighten closures Tip container on its side and roll it back and forth ensuring at least one complete revolution for 30 seconds Stand the container on its end and tip it back and forth several times Turn the container over onto its other end and tip it back and forth several times Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal Repeat this procedure two more times *Pressure rinse as follows* Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal Insert pressure rinsing nozzle in the side of the container and rinse at about 40 PSI for at least 30 seconds Drain for 10 seconds after the flow begins to drip

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

SANITIZATION OF NONPOROUS CONTACT SURFACES

CLEAN IN PLACE METHOD Thoroughly clean equipment after use Prepare a volume of 200 ppm available chlorine sanitizing solution equal to 110 / of volume capacity of the equipment by mixing the product in a ratio of 3 oz of product in 10 gallons of water Pump solution through the system until full flow is obtained at all extremities the system is completely filled with the s ni zer 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 c ain valve and test with a chlorine test kit Repeat entire cleaning/sanitizing process if effluent contains less than 50 ppm available chlorine
RINSE METHOD A solution of 100 ppm available chlorine may be used in the sanitizing solution if a test kit is available Solutions containing an initial concentra on of 100 ppm available chlorine must be tested and adjusted periodically to ensure that the available chlorine does not drop below 50 ppm Prepare a 100 ppm sanitizing solution by thoroughly mix ng 1 5 oz of this product with 10 gallons of water If no test kit is available prepare a sanitizing solution by thoroughly mixing 3 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 the equipment with water after treatment and do not soak equipment overnight
IMMERSION METHOD A solution of 100 ppm available chlorine may be used in the sanitizing solution if a test kit is available Solutions containing an initial con entration of 100 ppm available chlorine must be tested and adjusted periodically to ensure that the available chlorine does not drop below 50 ppm Prepare a 100 ppm sanitizing solution by thoroughl mixing 1 5 oz of this product with 10 gallons of water If no test kit is available prepare a sanitizing solution by thoroughly mixing 3 oz of this product with 10 gallons of water to provide approximately 200 ppm available chlorine by weight Clean the 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 I 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 the equipment with water after t eatmen

AL CLOR 10 is also approved for the following Swimming pool water disinfection farm premises disinfection fruit and vegetable washing processing and chill water for poultry processing food egg sanitization cooling tower/evaporative condenser water disinfection of drinking water sanitization of porous food contact surfaces Please write or call EXL LABORATORIES LC and a complete product label will be sent

HYPOCHLORITE SOLUTIONS, 8 UN1791, PG II

EXL Laboratories LLC
1001 Glenwood Avenue Minneapolis MN 55405

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FRONT PANEL

Hypochlorite Solution

AL – Clor 10

DISINFECTANT
GERMICIDE
SANITIZER

ACTIVE INGREDIENT	
Sodium Hypochlorite	10 0%
Other Ingredients	90 0%
Total	100 0%

DANGER

KEEP OUT OF REACH OF CHILDREN

FIRST AID

IF IN EYES

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

IF ON SKIN OR CLOTHING

- Take off contaminated clothing
- Rinse skin immediately with plenty of water for 15 – 20 minutes
- Call a poison control center or doctor for treatment advice

IF SWALLOWED

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

IF INHALED

- Move person to fresh air
- If person is not breathing, call 911 or an ambulance, and then give artificial respiration, preferably mouth-to-mouth if possible
- Call a poison control center or doctor for further treatment advice

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

For emergency information on Al-Clor 10, call the National Pesticides Information Center at 1-800-858-7378, 6 30 AM to 4 30 PM Pacific Time (PT), seven days a week During other times, call the poison control center at 1-800-222-1222

NOTE TO PHYSICIAN

(See additional precautions on side panel)

EXL Laboratories, LLC
1001 Glenwood Avenue
Minneapolis, MN 55405

EPA Reg No 3276-20002 EPA Est 3276-MN-1

SIDE PANEL

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CORROSIVE Causes irreversible eye damage and skin burns Do not get in eyes or on clothing Wear safety glasses or goggles, protective clothing, and rubber gloves when handling this product Avoid breathing vapors Vacate poorly ventilated area as soon as possible Do not return until strong odors have dissipated 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

ENVIRONMENTAL HAZARDS

This product is toxic to fish and aquatic organisms Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or public waters unless this product is specifically identified and addressed in an NPDES permit Do not discharge effluent containing this product into sewer systems without previously notifying the sewage treatment plant authority For guidance contact your State Water Board or regional office of the EPA

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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

PESTICIDE STORAGE Do not contaminate food or feed by storage, disposal or cleaning of equipment 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

PESTICIDE DISPOSAL Pesticide wastes may be hazardous Improper disposal is a violation of federal Law If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance

CONTAINER HANDLING Non-refillable Container Do not reuse or refill this container Offer for recycling if available Offer for reconditioning, if appropriate

CONTAINER CLEANING Triple rinse or pressure rinse container (or equivalent) promptly after emptying

Small Containers
Triple rinse as follows Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip Fill the container ¼ full with water and recap Shake for 10 seconds Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal Drain for 10 seconds after the flow begins to drip Repeat this procedure two more times

Large Containers
Triple rinse as follows Empty the remaining contents into application equipment or a mix tank Fill the container ¼ full with water Replace and tighten closures Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds Stand the container on its end and tip it back and forth several times Turn the container over onto its other end and tip it back and forth several times Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal Repeat this procedure two more times

Pressure rinse as follows Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds Drain for 10 seconds after the flow begins to drip

SIDE PANEL

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

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 1 5 oz of this product with 10 gallons of water If no test kit is available, prepare a sanitizing solution by thoroughly mixing 3 oz of this product with 10 gallons of water to provide approximately 200 ppm available chlorine by weight

Clean equipment surfaces in the normal manner Prior to use, rinse all surfaces thoroughly with the sanitizing solution maintaining contact with the sanitizer for at least 2 minutes If solution contains less than 50 ppm available chlorine, as determined by a suitable test kit, either discard the solution or add sufficient product to reestablish a 200 ppm residual Do not rinse equipment with water after treatment and do not soak equipment overnight

Sanitizers used in automated systems may be used for general cleaning but may not be reused for sanitizing purposes

IMMERSION METHOD—A solution of 100 ppm available chlorine may be used in the sanitizing solution if a chlorine test kit is available Solutions containing an initial concentration of 100 ppm available chlorine must be tested and adjusted periodically to insure that the available chlorine does not drop below 50 ppm Prepare a 100 ppm sanitizing solution by thoroughly mixing 1 5 oz of this product with 10 gallons of water If no test kit is available, prepare a sanitizing solution by thoroughly mixing 3 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 reused for sanitizing purposes

FLOW/PRESSURE METHOD—Disassemble equipment and thoroughly clean after use Assemble equipment in operating position prior to use Prepare a volume of 200 ppm available chlorine sanitizing solution equal to 100% of volume capacity of the equipment by mixing the product in a ratio of 3 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 200 ppm available chlorine sanitizing solution equal to 110% of volume capacity of the equipment by mixing the product in a ratio of 3 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 solution from drain valve and test with a chlorine test kit Repeat entire cleaning/sanitizing process if effluent contains less than 50 ppm available chlorine

SPRAY/FOG METHOD—Preclean all surfaces after use Use a 200 ppm available chlorine solution to control bacteria, mold or fungi and a 600 ppm solution to control bacteriophage Prepare a 200 ppm sanitizing solution of sufficient size by thoroughly mixing the product in a ratio of 3 oz product with 10 gallons of water Prepare a 600 ppm solution by thoroughly mixing the product in a ratio of 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

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SANITIZATION OF POROUS FOOD CONTACT SURFACES

RINSE METHOD—Prepare a 600 ppm solution by thoroughly mixing 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 with the sanitizer for at least 2 minutes Prepare a 200 ppm sanitizing solution by thoroughly mixing 3 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, 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 3 oz of this product with 10 gallons of water Prior to using equipment, immerse all surfaces with 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 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 3 oz of this product with 10 gallons of water

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SANITIZSATION OF NONPOROUS NON FOOD CONTACT SURFACES

RINSE METHOD—Prepare a sanitizing solution by thoroughly mixing 3 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, 3 oz of this product with 10 gallons of water to provide approximately 200 ppm available chlorine by weight 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 3 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 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, 8 oz of this product with 10 gallons of water to provide approximately 600 ppm available chlorine by weight 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 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, 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 ratio of 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 for at least 2 hours

AGRICULTURAL USES

FOOD EGG SANITIZATION—Thoroughly clean all eggs Thoroughly mix 3 oz of this product with 10 gallons of warm water to produce a 200 ppm available chlorine solution The sanitizer temperature should not exceed 130° F Spray the warm sanitizer so that the eggs are thoroughly wetted Allow the eggs to thoroughly dry before casing or breaking Do not apply a potable water rinse The solution should not be reused to sanitize eggs

FRUIT & VEGETABLE WASHING—Thoroughly clean all fruits and vegetables in a wash tank Thoroughly mix 5 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 rinsed vegetables with the sanitizing solution prior to packaging Rinse fruit with potable water only prior to packaging

PROCESSING AND CHILL WATER FOR POULTRY PROCESSING—Follow guidelines of local water authority for water potability treatment

Continuous feed Using automatic metering device, continuously feed this product into the water to obtain and/or maintain a level of available chlorine that is in accordance with USDA guidelines Confirm target chlorine level with either a chlorine test kit or an automatic testing device When the available chlorine level reaches 20 ppm, notify the USDA plant inspector

Intermittent feed Start up by adding 1 2 oz of this product per 1,000 gallons of water for each 1 ppm of available chlorine needed For subsequent doses, check chlorine level with a chlorine test kit, add enough of this product to maintain the target chlorine level, and confirm this level with a chlorine test kit Do not pour this product directly on poultry product in the water

FARM PREMISES

Remove all animals, poultry and feed from premises, vehicles and enclosures Remove all litter and manure from floors, walls and surfaces of barns, pens, stalls, chutes, and other facilities occupied or traversed by animals or poultry Empty all troughs, racks and other feeding and watering appliances Thoroughly clean all surfaces with soap or detergent and rinse with water To disinfect, saturate all surfaces with a solution of at least 1000 ppm available chlorine for a period of 10 minutes A 1000 ppm solution can be made by thoroughly mixing 12 oz of this product with 10 gallons of water Immerse all halters, ropes and other types of equipment used in handling and restraining animals or poultry, as well as the cleaned forks, shovels and scrapers used for removing litter and manure Ventilate buildings cars, boats and other closed spaces Do not house livestock or poultry or employ equipment until chlorine has been dissipated All treated feed racks, mangers, troughs, automatic feeders, fountains and waterers must be rinsed with potable water before reuse

AQUACULTURAL USES

FISH PONDS—Remove fish from ponds prior to treatment Thoroughly mix 108 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 3 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 7,750 oz of this product to 10,000 gallons of water to obtain at least 600 ppm available chlorine Apply so that all barrows, gates, rocks and dams are treated with product Permit high tide to fill the pond and then close 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 6 5 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 the entire process if the available chlorine 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 3 oz of product with 10 gallons of water Pour into drained pond potholes Repeat if necessary Do not put desirable fish back into refilled ponds until chlorine residual has dropped to zero, as determined by a test kit

BOAT BOTTOMS

To control slime on boat bottoms, sling a plastic tarp under boat, retaining enough water to cover the fouled bottom but not allowing water to enter enclosed area This envelope should contain approximately 500 gallons of water for a 14 foot boat Add 22 5 oz of this product to this water to obtain a 35 ppm available chlorine concentration Leave immersed for 8 to 12 hours Repeat if necessary Do not discharge the solution until the free chlorine level has dropped to zero, as determined by a swimming pool test kit

ARTIFICIAL SAND BEACHES

To sanitize the sand, spray a 500 ppm available chlorine solution containing 6 5 oz of this product per 10 gallons of water at frequent intervals Small areas can be sprinkled with a watering can

ASPHALT OR WOOD ROOFS AND SIDING

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 6 5 oz of this product per gallon of water and brush or spray roof or siding After 30 minutes, rinse by hosing with clean water

DISINFECTION OF DRINKING WATER (PUBLIC/INDIVIDUAL SYSTEMS)

PUBLIC SYSTEMS—Mix a ratio of 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) wash the interior of the casing (lining) with a 100 ppm available chlorine solution using a stiff brush This solution can be made by thoroughly mixing 1 5 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 SYSTEMS DRILLED, DRIVEN & BORED WELLS—Run pump until water is as free from turbidity as possible Pour a 100 ppm available chlorine sanitizing solution into the well This solution can be made by thoroughly mixing 1 5 oz of this product into 10 gallons of water Add 5 to 10 gallons of clean, chlorinated water to the well in order to force the sanitizer into the rock formation Wash the exterior of the pump cylinder with the sanitizer Drop 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 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

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PUBLIC WATER SYSTEMS

RESERVOIRS ALGAE CONTROL—Hypochlorinate streams feeding the reservoir Suitable feeding points must 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 main section after a 24 hour retention time Where 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 25 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 100 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 5 oz of this product for each 100 gallons of water The solution must be pumped or fed by gravity into the well after thorough mixing with agitation The well must 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 and thoroughly clean surfaces of all physical soil Sanitize by placing 25 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 6 oz of this product for each 5 gallons of water (approximately 1000 ppm available chlorine) After drying flush with water and return to service

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COOLING TOWER/EVAPORATIVE CONDENSERWATER

SLUG FEED METHOD—Initial Dose When system is noticeably fouled, apply 54 to 108 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 12 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 54 to 108 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 12 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 54 to 108 oz of this product per 10,000 gallons of water in the system to obtain 5 to 10 ppm available chlorine

Subsequent Dose Maintain this treatment level by starting a continuous feed of 1 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

EMERGENCY DISINFECTION AFTER FLOODS

WELLS—Thoroughly flush contaminated casing with a 500 ppm available chlorine solution Prepare this solution by mixing 6 5 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 15 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 6 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 service

FILTERS—When the sand filter needs replacement, apply 100 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 100 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 100 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 with a 500 ppm available chlorine solution and rinse with potable water after 5

minutes This solution is made by mixing 6 oz of this product for each 10 gallons of water During the filling of the containers, dose with sufficient amounts of this product to provide at least a 0 2 ppm chlorine residual Use a chlorine test kit

EMERGENCY DISINFECTION AFTER MAIN BREAKS

MAINS—Before assembly of the repaired section, flush out mud and soil Permit a water flow of at least 2 5 feet per minute to continue under pressure while injecting this product by means of a hypochlorinator Stop water flow when a chlorine residual test of 50 ppm is obtained at the low pressure end of the new main section after a 24 hour retention time When chlorination is completed, the system must be flushed free of all heavily chlorinated water

PULP AND PAPER MILL PROCESS WATER SYSTEMS

SLUG FEED METHOD—Initial Dose When system is noticeably fouled, apply 54 to 108 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 12 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 54 to 108 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 12 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 54 to 108 oz of this product per 10 000 gallons of water in the system to obtain 5 to 10 ppm available chlorine

Subsequent Dose Maintain this treatment level by starting a continuous feed of 1 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

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 that 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

SEWAGE & 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 11 to 109 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 4 oz of this product with 100 gallons of water

FILTER BEDS SLIME CONTROL—Remove filter from service, drain to a depth of 1 foot above filter, and add 90 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

SWIMMING POOL WATER DISINFECTION

For a new pool or spring start-up, superchlorinate with 54 to 108 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 and 7 6 Adjust and maintain the alkalinity of the pool to between 50 and 100 ppm

To maintain the pool, add manually or by a feeder device 12 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 54 to 108 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 and 3 0 ppm

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

WINTERIZING POOLS—While water is still clear and clean, apply 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 6 5 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 6 5 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 10 oz of this product per 500 gallons of water to control odor and algae

During extended periods of disuse, add 4 oz of product daily per 1000 gallons of water to maintain a 3 ppm chlorine concentration

HUBBARD AND IMMERSION TANKS—Add 6 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 6 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 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

LAUNDRY SANITIZERS

Household Laundry Sanitizers

IN SOAKING SUDS—Thoroughly mix 3 oz of this product to 10 gallons of wash water to provide 200 ppm available chlorine Wait 5 minutes, then add soap or detergent Immerse laundry for at least 11 minutes prior to starting the wash/rinse cycle

IN WASHING SUDS—Thoroughly mix 3 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 3 oz of this product with 10 gallons of water to provide 200 ppm available chlorine Promptly after mixing the sanitizer, add the solution to 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

SANITIZATION OF DIALYSIS MACHINES

Flush equipment thoroughly with water prior to using this product Thoroughly mix 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 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 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, AZ 85021