



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

MAY 25 2010

OFFICE OF CHEMICAL SAFETY AND  
POLLUTION PREVENTION

John R. French  
Arch Chemicals, Inc.  
5660 New Northside Drive  
Suite 1100  
Atlanta, GA. 30328

Amendment dated: February 24, 2010  
Product Name: EASIFLO Dry Chlorinator Granular  
EPA Registration Number: 1258-1185

Dear Mr. French:

The Agency has reviewed your submission in accordance with continuing registration under the Federal Insecticide Fungicide and Rodenticide Act (FIFRA), as amended, and determined the action to be acceptable with the following conditions:

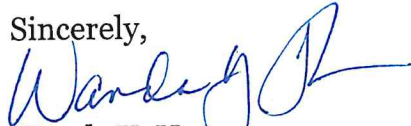
- We have deleted the referenced web site [www.xxx.com](http://www.xxx.com) as the Agency was unable to access this web site to review. The Agency is required to review any web page referenced on the label for compliance with FIFRA.
- We have deleted the marketing claim "contains no cyanuric acid" as unacceptable. Statements or claims that express the absence of certain ingredients are misleading statements prohibited by 40 CFR § 156.10 (a) (5). The proposed claim falsely suggest to the purchaser that the product is less risky, better, or more desirable than a product containing cyanuric acid.
- We have deleted the marketing claim "Patented Formulation for Reduced Maintenance" since it is a comparative claim.
- We have deleted the public health pathogens *Escherichia coli* and *Enterococcus faecium*. Product performance data are required for these claims and would be limited to the targeted test site, for example, swimming pools or spas, not all water. The data cited in your cover letter do not apply as the test material was not substantially similar.
- At use 2, add "and follow the directions of that product" to the end of the paragraph.
- At use 4, fix the typos for "Do" and "with" as marked.
- At use 6, change "of the" to "to ensure that the" as marked.
- At use 7, fix the typo for "to" as marked.
- At use 8, delete the word "Interim".
- At use 14, fix the typo for "to" as marked.
- At use 17, fix the typo for "to" as marked.

Your application states that Child Resistant Packaging is not required for this product. That is not the case for any of your calcium hypochlorite swimming pool products less than 50 pounds. You are advised to review the requirements established in 40 CFR §157.20 through §157.36.

In summary, your request to amend your label by updating the Storage and Disposal instructions, the precautionary statements and adding uses established in the Calcium and Sodium Hypochlorite RED is acceptable.

A copy of your stamped conditionally accepted label is enclosed. Please submit a finished label for our files. Should you have any questions or comments concerning this letter, please contact Tom Luminello at (703) 308-8075.

Sincerely,



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

Items in brackets [AAA] are optional and may/may not be included on final label]  
Items in braces {AAA} are for information purposes and will not appear on final label}

**EASIFLO® DRY CHLORINATOR GRANULAR**

ACTIVE INGREDIENT: CALCIUM HYPOCHLORITE ..... 68%  
OTHER INGREDIENTS: ..... 32%  
TOTAL ..... 100%

MINIMUM AVAILABLE CHLORINE...65%

**KEEP OUT OF REACH OF CHILDREN**

**DANGER / PELIGRO**

Contamination or improper use may cause fire, explosion or the release of toxic gases. Do not allow product to contact any foreign matter, including other water treatment products. If product is exposed to small amounts of water, it can react violently to produce heat and toxic gases and spatter. Do not add water to this product. Add only into water. {The following optional statement is for use on residential use swimming pool and spa products} Do not mix this product with a small amount of water. Only add directly to your pool or spa. Highly Corrosive. Causes skin and eye damage. May be fatal if swallowed.

Read all precautionary statements on label and first aid statements [on side {or} back panel] before use.

**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 person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, 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.

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

IN CASE OF EMERGENCY CALL: 1-800-654-6911

EPA Reg. No. 1258-1185

EPA EST. NO. XXXX-YY-ZZZ  
[Superscript Used in Lot Number]

Net Wt. ###

{BACK OR SIDE PANEL-MANDATORY LANGUAGE FOR ALL LABELS}

**PRECAUTIONARY STATEMENTS**

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**DANGER: Highly corrosive.** Causes irreversible eye damage and skin burns. **May be fatal if swallowed.** Irritating to nose and throat.

- Open in a well ventilated area. Avoid breathing dust and fumes.

ACCEPTED  
WITH COMMENTS  
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Under the Federal Insecticide, Fungicide, and Rodenticide Act, this pesticide is registered under the following conditions:  
1. The pesticide is to be used only in accordance with the label.  
2. The pesticide is to be used only on the crops and pests listed on the label.  
3. The pesticide is to be used only in the states and territories listed on the label.

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- Do not get in eyes, on skin, or on clothing. Do not handle with bare hands. Wear goggles and use rubber gloves. For additional protection of skin, wear long sleeves and long pants.
- Remove and wash contaminated clothing before reuse.
- Use only utensils that are thoroughly clean and dry. {For products not in a single use package.}
- Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.

**PHYSICAL and CHEMICAL HAZARDS:**

**If product is exposed to small amounts of water, it can react violently to produce heat and toxic gases and spatter. Do not add water to this product. Add only into water.**

- [Do not mix this product with a small amount of water. Only add this product directly to your pool.]  
{This statement will appear on Pool use labels only.}
- Do not allow to become wet or damp before use.
- **Can react with other materials, including other water treatment products, to cause intense fire, explosion, and the release of toxic gases.**
- Keep all foreign matter, including other water treatment products, away from this product.
- Do not allow this product to contact other water treatment products. Do not use this product in a floater or feeder that has been used with any other product. If used with a skimmer, make sure skimmer is completely clean and free of residue from other water treatment products before putting this product in a skimmer.

**Exposure to heat can cause this product to rapidly decompose, leading to intense fire, explosion, and the release of toxic gases.**

- Store in a cool, dry, well ventilated area.

**Strong oxidizing agent. This product can increase fire intensity.** Keep away from heat and from flame and burning material (like a lighted cigarette).

**ENVIRONMENTAL HAZARDS:** This pesticide is toxic to fish and aquatic organisms. {Environmental hazards statement for end-use products in containers  $\geq$  5 gallons (liquid) or  $\geq$  50 pounds (solid, dry weight) or all container sizes of technical grade or manufacturing use products registered for industrial/commercial/institutional water treatment or processing uses} Do not discharge effluent containing this product into lakes, ponds, streams, estuaries, oceans or public waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

**STORAGE & DISPOSAL:**

{Nonrefillable container - household/residential use}

[Keep this product dry in its tightly closed container when not in use. Store in a cool, dry, well-ventilated area. Keep away from heat or open flame. Nonrefillable container. Do not reuse or refill this container. Rinse empty container thoroughly with water to dissolve all material prior to disposal. Offer for recycling if available. Do not contaminate food or feed by storage or disposal or cleaning of equipment. FOR DISPOSAL OF A CONTAMINATED OR DECOMPOSING PRODUCT SEE EMERGENCY HANDLING.]

{Nonrefillable container – SINGLE-USE, non-resealable package}

[Keep this product dry in its tightly closed container. Store in a cool, dry, well-ventilated area. Keep away from heat or open flame. Nonrefillable container. Do not reuse or refill this container. Rinse and discard empty container thoroughly with water to dissolve all material prior to disposal. Offer for recycling if available. Do not contaminate food or feed by storage or disposal or cleaning of equipment. FOR DISPOSAL OF A CONTAMINATED OR DECOMPOSING PRODUCT SEE EMERGENCY HANDLING.]

{Refillable container – household/residential use}

[Keep this product dry in its tightly closed container when not in use. Store in a cool, dry, well-ventilated area. Keep away from heat or open flame. Do not contaminate food or feed by storage or disposal or cleaning of equipment. FOR DISPOSAL OF A CONTAMINATED OR DECOMPOSING PRODUCT SEE EMERGENCY HANDLING. Refillable container. Refill this container with calcium hypochlorite only. Do

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{Optional} [ ]



{Optional} [ ]

[[HTH] [HTH POOLIFE] (Brand Name) HELPLINE  
[866-HTH-POOL] [866-4-POOL-FUN]

Toll Free

Call 7 days a week with your questions concerning pool water care. 8:00 a.m. - 10:00 p.m. Eastern Time

~~Visit [brand]: [www.xxx.com](http://www.xxx.com)~~

*delete*

**{OPTIONAL MARKETING CLAIMS}**

[Kills Bacteria, Controls Algae, and Destroys Organic Contaminants]

[Dry, free-flowing form]

[Kills bacteria] [Controls algae] and [destroys organic contaminants in [pools] [spas & hot tubs]]

[Concentrated chlorinating agent]

[65% available chlorine]

[Fast acting]

[Quick dissolving]

[Destroys bacteria]

[Sanitizes pool water]

[Swimming pool sanitizer]

[Chlorinating granules for multipurpose uses]

[Chlorinating granules for multiple pool and spa uses]

[Will not cause over stabilization]

~~[Contains no cyanuric acid]~~

*delete*

[Good for all pool surfaces]

[Use only with [BRAND] chlorinator systems]

~~[Patented Formulation for Reduced Maintenance]~~

*delete*

[Chlorinating granules for multiple pool and spa uses]

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not use this container for any other purpose. Rinse empty container thoroughly with water to dissolve all material prior to disposal.]

{Nonrefillable container - non-household/residential use}

[Keep this product dry in its tightly closed container when not in use. Store in a cool, dry, well-ventilated area. Keep away from heat or open flame. Do not contaminate food or feed by storage or disposal or cleaning of equipment. FOR DISPOSAL OF A CONTAMINATED OR DECOMPOSING PRODUCT SEE EMERGENCY HANDLING. Nonrefillable container. Do not reuse this container. Offer for recycling if available. Rinse empty container thoroughly with water to dissolve all material prior to disposal.]

{Refillable container – non-household/residential use}

[Keep this product dry in its tightly closed container when not in use. Store in a cool, dry, well-ventilated area. Keep away from heat or open flame. Do not contaminate food or feed by storage or disposal or cleaning of equipment. FOR DISPOSAL OF A CONTAMINATED OR DECOMPOSING PRODUCT SEE EMERGENCY HANDLING. Refillable container. Refill this container with calcium hypochlorite only. Do not use this container for any other purpose. Cleaning of this container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. Rinse empty container thoroughly with water to dissolve all material prior to disposal.]

**EMERGENCY HANDLING:** In case of contamination or decomposition – Do not reseal container. Immediately remove container to an open and well-ventilated outdoor area by itself. Flood with large amounts of water. Dispose of the container and any remaining contaminated material in an approved landfill area.

Sold by:  
Arch Chemicals, Inc.  
P. O. Box 723547  
Atlanta, GA 31139-3547

Toll-Free -800-HTH-POOL (800-484-7665) (866-4POOLFUN)

[HTH®], [Sock It®], [Super Sock It®] and [pH Plus®] [Pulsar®], [DryTec®], [ConstantChlor®], [CCH®] (brand name) are registered trademarks of Arch Chemicals, Inc.

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with conditions  
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**DIRECTIONS FOR USE:** It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

READ ALL PRECAUTIONARY STATEMENTS BEFORE USE.

~~When used in accordance with its label, this product will sanitize water by killing the following organisms:~~

~~*Escherichia coli*  
*Enterococcus faecium*~~

*delete*

{Use 1-Pools} {SWIMMING POOL USES}

**[WHY YOU SHOULD USE THIS PRODUCT:** This is a highly effective, multi-purpose product that sanitizes, clarifies, [helps] prevent[s] algae and shock treats your pool. It is convenient, easy to use, and won't over-stabilize your pool. [For crystal [clean] [clear] pool water, follow our 4 step pool care program: Step 1: Test and adjust pool water balance, Step 2: Chlorinate and clarify, Step 3: Shock treat your pool at least once a week, and Step 4: Add algaecide regularly [where needed]. [For best results follow a weekly program with a [brand] System. Consult your authorized [brand] dealer for advice on the system that best suits your pool and your lifestyle.] [Take a pool water sample to your authorized [brand] dealer regularly for a detailed water analysis.]

Additional shocking to keep water clean and clear is recommended after: rain and heavy winds; high number of swimmers; increased water temperature; and/or increased frequency of pool usage.]

{Optional for commercial pool, municipal, and industrial labels:}

[This product is a concentrated chlorinating agent in a dry, free-flowing form which controls the growth of algae, kills bacteria, and destroys organic contaminants in pools, spas and hot tubs.]

{Small pools (500 gallons to less than 10,000 gallons) and pools 10,000 gallons and above}

**HOW TO USE:** [Do not pre-mix this product before adding it to your pool. Only add this product directly to your pool or skimmer.] {When contents are in a resealable container} [Use only a clean, dry [scoop] [lid] to measure this product]. [Do not use the [scoop] [lid] for any other purpose.] {When contents are in a single use bag for use as a shock for pools 10,000 gallons or larger} [Use entire contents when opened].

[Method for dosing directly into pool:]

Add the recommended dosage of this product during evening hours while the filter pump is running.

When adding this product to your pool, broadcast the product evenly over a wide area in the deepest part of the pool. If any granules settle to the bottom of the pool, use brush to disperse.

[Method for skimmer addition:

[Use this method to avoid bleaching vinyl liner or paint.] Make sure that filter pump is on and properly recirculating through skimmer. Empty skimmer of all chemicals and/or debris. Contamination may cause an explosion or the release of toxic gases. Do not use this method when an automatic chemical dispensing device (e.g. feeder) is present.

Pour this product slowly into skimmer, making sure that the material is drawn into the system at the same rate; do not allow this material to accumulate as toxic gases may be generated.]

**WATER BALANCE:** For best product performance, swimmer comfort, and crystal clear water: Maintain pH in the range of 7.2 to 7.6. Maintain total alkalinity in the range of 60 to 120 {retail brands only} {Commercial product for very large commercial or municipal pools will use 100} parts per million (ppm). Maintain calcium hardness above 200 ppm. Use a reliable test kit that measures all these ranges. Use [BRAND] Pool Care Products to make adjustments. Follow label directions for each product. Re-entry into treated pools is prohibited above levels of 4 ppm due to risk of bodily harm.

**OPENING YOUR POOL:** For best results, see the "WATER BALANCE" section above before treatment. Always adjust and maintain pH in the 7.2 to 7.6 range. Follow "SHOCK TREATMENT" directions on this

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package. Allow 30 minutes for product to disperse. Test free available chlorine residual with a pool test kit. Repeat treatment as needed.

**[ROUTINE CHLORINATION:** For best results, see "WATER BALANCE" section above before treatment. Throughout the pool season, adjust and maintain pH at 7.2–7.6. Check available chlorine with a suitable test kit.]

{For small pools 500 gallons to less than 10,000 gallons}

[Each 0.1 - 0.4 ounces of this product will provide approximately 1-4 ppm available chlorine in 500 gallons of water. Maintain these conditions for proper operation by frequent testing with a test kit. Follow "HOW TO USE" directions on this package.]

{For pools 10,000 gallons and larger}

[FOR UNSTABILIZED POOLS: Add 6-8 ounces of this product per 10,000 gallons of pool water daily or as often as needed to maintain the free available chlorine residual at 1 – 4 ppm. Follow "HOW TO USE" directions on this package. FOR POOLS STABILIZED USING [BRAND] STABILIZER AND CONDITIONER: Add 3–4 ounces per 10,000 gallons every other day or as often as needed to maintain the free available chlorine residual at 1-4 ppm. Follow "HOW TO USE" directions on this package.]

{For pools 10,000 gallons and larger}

**[SHOCK TREATMENT / SUPERCHLORINATION:** For best results, see "WATER BALANCE" and "HOW TO USE" sections above before treatment. Every 7 days, or as necessary to prevent pool problems, shock treat / super chlorinate the pool by adding 10-20 ounces [one bag {for 16 oz containers}] of this product per 10,000 gallons of water to provide 5 to 10 ppm available chlorine. Additional shock treatments may be required to correct problems which are caused by visible algae, high bathing loads, heavy wind and rainstorms. Additional shock treatments may also be required to correct problems such as unpleasant odors and eye irritation. Check the available chlorine with a suitable test kit.]

{For pools 10,000 gallons and larger}

**[ALGAE CONTROL:** Follow "SHOCK TREATMENT" directions on this label. Add this product as close as possible to any algae on the sides or bottom of the pool. If necessary, repeat the treatment. To prevent possible staining or bleaching, take the following steps immediately after treatment: Thoroughly clean pool by brushing surface of algae growth, vacuum and cycle through filter. ] [For preventative algae control, use your preferred [BRAND] algacide product regularly. Follow label directions on the algacide.]

{Labels of resealable containers used to treat pools 10,000 gallons and larger}

**[WINTERIZING:** For best results, see "WATER BALANCE" section above before treatment. Gradually add 30 ounces of this product per 10,000 gallons of pool water that is clear and clean. This provides 15 ppm free available chlorine. Follow "HOW TO USE" directions on this package. Run the filter pump until granules are completely dissolved. Cover the pool with a pool cover. Prepare the heater, pump and filter components for winterizing by following manufacturer's directions.]

[TO DETERMINE YOUR POOL CAPACITY IN U.S. GALLONS, USE THE APPROPRIATE FORMULA BELOW:

POOL SHAPE FORMULA (Use measurements in feet only)

- RECTANGULAR - Length x Width x Average Depth x 7.5 = Total Gallons.
- ROUND - Diameter x Diameter x Average Depth x 5.9 = Total Gallons.
- OVAL - Maximum Length x Maximum Width x Average Depth x 5.9 = Total Gallons.
- FREE FORM - Surface Area (Sq. Feet) x Average Depth x 7.5 = Total Gallons]

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**{Use 2} [SPA & HOT TUBS:**

Apply 0.5 oz. of product per 500 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 7.6. 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 0.5 oz. of this product per 500 gallons of water over the surface to maintain a chlorine concentration of 5 ppm. Do not enter spa until chlorine residual is 2-5 ppm. After each use, shock with an EPA registered sanitizer to control odor and algae *and follow the*

**{Use 3} [SANITIZATION OF NONPOROUS NON-FOOD CONTACT SURFACES:**

**RINSE METHOD** - Prepare a sanitizing solution by thoroughly mixing 1 oz. of this product with 20 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 a immersion tank, 1 oz. of this product with 20 gallons of water to provide approximately 200 ppm available chlorine by weight. Clean equipment in the normal manner. Prior to use, immerse equipment in the sanitizing solution for at least 2 minutes and allow the sanitizer to drain. Do not rinse equipment with water after treatment.

**[COARSE] SPRAY METHOD** - Pre-clean all surfaces after use. Prepare a 200 ppm available chlorine sanitizing solution of sufficient size by thoroughly mixing the product in a ratio of 1 oz. product with 20 gallons of water. Use spray equipment which can resist hypochlorite solutions. Prior to using equipment, thoroughly spray all surfaces until wet, allowing excess sanitizer to drain. Vacate area for at least 2 hours.]

*directions  
of that  
product*

**{Use 4} [DISINFECTION OF NONPOROUS NON-FOOD CONTACT SURFACES:**

**RINSE METHOD** - Prepare a disinfecting solution by thoroughly mixing 3 oz. of this product with 20 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 *Do* mixing, in an immersion tank, 3 oz. of this product with 20 gallons of water to provide approximately 600 ppm available chlorine by weight. Clean equipment in the normal manner. Prior to use, immerse equipment in the disinfecting solution for at least 10 minutes and allow the sanitizer to drain. Do not rinse equipment *with* water after treatment.

**{Use 5} [SANITIZATION OF POROUS NON-FOOD CONTACT SURFACES:**

**RINSE METHOD** - Prepare a sanitizing solution by thoroughly mixing 3 oz. of this product with 20 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, 3 oz. of this product with 20 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.

**[COARSE] SPRAY METHOD** - After cleaning, sanitize non-food contact surfaces with 600 ppm available chlorine by thoroughly mixing the product in a ratio of 3 oz. of this product with 20 gallons of water. Use spray equipment which can resist hypochlorite solutions. Always empty and rinse spray equipment with potable water after use. Prior to using equipment, thoroughly spray all surfaces until wet, allowing excess sanitizer to drain. Vacate area for at least 2 hours.]

**{Use 6} [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

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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 waste water be instantaneously and completely flash mixed to assure reaction with every chemically active soluble and particulate component of the waste water.
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.]

**{Use 7} [SEWAGE AND WASTEWATER TREATMENT:**

**EFFLUENT SLIME CONTROL** - Apply a 100 <sup>to</sup> 1,000 ppm available chlorine solution at a location which will allow complete mixing. Prepare this solution by mixing 2 to 20 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 0.3 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 16 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.]

**{Use 8} [DISINFECTION OF DRINKING WATER - EMERGENCY/PUBLIC/INDIVIDUAL SYSTEMS:**

**PUBLIC SYSTEMS-** [Mix a ratio of 1 oz. of this product to 6,000 gallons of water.] {or} [Mix a ratio of 10 oz. to 30 oz. of this product into 10 gallons of water to make a 0.5% to 1.5% solution. {added to provide a smaller quantity of feeder solution when needed}] 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 oz. of this product into 40 gallons of water. After covering the well, pour the sanitizing solution into the well through both the pipe sleeve opening and the pipeline. Wash the exterior of the pump cylinder also with the sanitizing solution. Start pump and pump water until strong odor of chlorine in water is noted. Stop pump and wait at least 24 hours. After 24 hours flush well until all traces of chlorine have been removed from the water. Contact your local Health Department for further details.

**INDIVIDUAL WATER SYSTEMS: DRILLED, DRIVEN & BORED WELLS** - Run pump until water is as free from turbidity as possible. Pour a 100 ppm available chlorine sanitizing solution into the well, this solution can be made by thoroughly mixing 1 oz. of this product into 40 gallons of water. Add 5 to 10 gallons of clean, chlorinated water to the well in order to force the sanitizer into the rock formation. Wash the exterior of pump cylinder with the sanitizer. Drop pipeline into well, start pump and pump water until strong odor of chlorine in water is noted. Stop pump and wait at least 24 hours. After 24 hours flush well until all traces of chlorine have been removed from the water. Deep wells with high water levels may necessitate the use of special methods for introduction of the sanitizer into the well. Consult your local Health Department for further details.

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

**EMERGENCY DISINFECTION-** When boiling of water for 1 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.

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*delete*

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Decant the clarified, contaminated water to a clean container and add 1 grain of this product to 1 gallon of water. One grain is approximately the size of the letter "o" in this sentence. 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.]

**{Use 9} [PUBLIC WATER SYSTEMS:**

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

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

**NEW TANKS, BASINS, ETC.** - Remove all physical soil from surfaces. Place 4 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 16 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 1 oz. of this product for each 100 gallons of water. The solution should be pumped or fed by gravity into the well after thorough mixing with agitation. The well should stand for several hours or overnight under chlorination. It may then be pumped until a representative raw water sample is obtained. Bacterial examination of the water will indicate whether further treatment is necessary.

**EXISTING EQUIPMENT** - Remove equipment from service, thoroughly clean surfaces of all physical soil. Sanitize by placing 4 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 1 oz. of this product for each 5 gallons of water (approximately 1,000 ppm available chlorine). After drying, flush with water and return to service.]

**{Use 10} [EMERGENCY DISINFECTION AFTER FLOODS:**

**WELLS** - Thoroughly flush contaminated casing with a 500 ppm available chlorine solution. Prepare this solution by mixing 1 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. Treat well again 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 4 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 1 oz. of this product for each 5 gallons of water (1,000 ppm available chlorine). Allow to stand for 2 - 4 hours, flush and return to service.

**FILTERS** - when the sand filter needs replacement, apply 16 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 16 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 back washed of mud and silt, apply 16 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

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minutes, drain water to the level of the filter. After 4 to 6 hours drain, and proceed with normal back washing.

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

**{Use 11} [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.]

**{Use 12} [EMERGENCY DISINFECTION AFTER DROUGHTS:**

**SUPPLEMENTARY WATER SUPPLIES** - Gravity or mechanical hypochlorite feeders should be set up on a supplementary line to dose the water to a minimum chlorine residual of 0.2 ppm after a 20 minute contact time. Use a chlorine test kit.

**WATER SHIPPED IN BY TANKS, TANK CARS, TRUCKS, ETC.** -Thoroughly clean all containers and equipment. Spray a 500 ppm available chlorine solution and rinse with potable water after 5 minutes. This solution is made by mixing 1 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.]

**{Use 13} [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.]

**{Use 14} [COOLING TOWER/EVAPORATIVE CONDENSER WATER:**

**SLUG FEED METHOD** - Initial dose: When system is noticeably fouled, apply 10 to 20 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 2 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 10 to 20 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 blow down. Subsequent Dose: When microbial control is evident, add 2 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 blow down. Badly fouled systems must be cleaned before treatment is begun.

**CONTINUOUS FEED METHOD** - Initial dose: When system is noticeably fouled, apply 10 to 20 oz. of this product per 10,000 gallons of water in the system to obtain 5 to 10 ppm available chlorine. Subsequent Dose: Maintain this treatment level by starting a continuous feed of 2 oz. of this product per 10,000 gallons of water lost by blow down to maintain a 1 ppm residual. Badly fouled systems must be cleaned before treatment is begun.]

**{Use 15} [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 2 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.

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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.]

**{Use 16} [PULP AND PAPER MILL PROCESS WATER SYSTEMS:**

**SLUG FEED METHOD** - Initial Dose: When system is noticeably fouled, apply 10 to 20. 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 2 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 10 to 20 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 blow down. Subsequent Dose: When microbial control is evident, add 2 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 blow down. Badly fouled systems must be cleaned before treatment is begun.

**CONTINUOUS FEED METHOD** - Initial dose: When system is noticeably fouled, apply 10 to 20 oz. of this product per 10,000 gallons of water in the system to obtain 5 to 10 ppm available chlorine. (Subsequent Dose: Maintain this treatment level by starting a continuous feed of 2 oz. of this product per 10,000 gallons of water lost by blow down to maintain a 1 ppm residual. Badly fouled systems must be cleaned before treatment is begun.]

**{Use 17} (AQUACULTURAL USES:**

**FISH PONDS** - Remove fish from ponds prior to treatment. Thoroughly mix 20 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 1 oz. of this product to 20 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 1,200 oz. of this product to 10,000 gallons of water to obtain at least 600 ppm available chlorine. Apply so that all barrows, gates, rock and dam are treated with product. Permit high tide to fill the pond and then close gates. Allow water to stand for 2 to 3 days until the available chlorine level reaches zero. Open gates and allow 2 tidal cycles to flush the pond before returning lobsters to pond.

**CONDITIONING LIVE OYSTERS** - Thoroughly mix 1 oz. of this product to 10,000 gallons of water at 50 to 70°F to obtain 0.5 ppm available chlorine. Expose oysters to this solution for at least 15 minutes, monitoring the available chlorine level so that it does not fall below 0.05 ppm. Repeat entire process if the available chlorine level drops below 0.05 ppm or the temperature falls below 50°F.

**CONTROL OF SCAVENGERS IN FISH HATCHERY PONDS** - Prepare a solution containing 200 ppm of available chlorine by mixing 0.5 oz. of product with 10 gallons of water. Pour into drained pond potholes. Repeat if necessary. Do not put desirable fish back into refilled ponds until chlorine residual has dropped to 0 ppm, as determined by a test kit.]

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