1258-427 8/4/2008 1/23

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

EPA United States Environmental Protection Agency **Office of Pesticide Programs**

August 04, 2008

FILE COPY

John R. French
Arch Chemicals, Inc.
1955 Lake Park Drive, Suite100
Smyrna, GA 30080

Subject: **HTH Dry Chlorinator Granular**
EPA Registration Number: 1258-427
Application Dated: July 07, 2008
Receipt Date: July 08, 2008

Dear Mr. French:

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

Proposed Notification

- Typographical errors and omission of previously accepted text.

General Comment

Based on a review of the material submitted, the following comment applies:

This notification is accepted and a copy has been inserted in your file for future reference.

Should you have any questions concerning this letter, please contact Wanda Henson at (703) 308-6345.

Sincerely,

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

Arch Chemicals, Inc.
1955 Lake Park Drive
Suite 100
Smyrna, GA 30080
Tel: 770.801.6600

2/23

July 7, 2008

Ms. Emily Mitchell (PM-32)
Office of Pesticide Programs (7504P)
C/O Document Processing Desk (NOTIF)
U.S. Environmental Protection Agency
Room S-4900, One Potomac Yard
2777 South Crystal Drive
Arlington, VA 22202-4501

Subject: HTH Dry Chlorinator Granular (EPA Reg. No. 1258-427)
Notification to correct minor typographical errors on label

Dear Ms. Mitchell:

This correspondence constitutes our notification to the Agency that we are correcting minor typographical errors on the label that were not observed during the previous review.

In support of this notification, enclosed please find the following documents:

- Application for pesticide (8570-1);
- Revised label, with the changes indicated in red font.

Please feel free to contact me at any time, either by telephone (direct: 770-805-3226) or by e-mail (JRFrench@archchemicals.com) with regard to this action.

Sincerely,

John R. French

John R. French, Ph.D.
Senior Regulatory Manager

Please read instructions on reverse before completing form. Form Approved. OMB No. 2070-0060. Approval expires 2-28-95

3/23

EPA

d States
Environmental Protection Agency
Washington, DC 20460

- [ ] R stration
- [ ] Amendment
- [x] Other

OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number	2. EPA Product Manager	3. Proposed Classification
1258-427	E. Mitchell	[x] None [ ] Restricted
4. Company/Product (Name)	**PM#**	
HTH Dry Chlorinator Granular	32	

5. Name and Address of Applicant *(Include ZIP Code)*

Arch Chemicals, Inc.
1955 Lake Park Drive, Suite 100
Smyrna, GA 30080

[ ] *Check if this is a new address*

6. Expedited Reveiw. In accordance with FIFRA Section 3(c)(3)(b)(i), my product is similar or identical in composition and labeling to:

EPA Reg. No. _____

Product Name _____

Section - II

- [ ] Amendment - Explain below.
- [ ] Resubmission in response to Agency letter dated _____
- [x] Notification - Explain below.
- [x] Final printed labels in repsonse to Agency letter dated _____
- [ ] "Me Too" Application.
- [ ] Other - Explain below.

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

Notification to correct minor typographical errors.

This notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR 152.46, and no other changes have been made to the labeling or the confidential statement of formula of this product. I understand that it is a violation of 18 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 10 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under Sections 12 and 14 of FIFRA.

Section - III

1. Material This Product Will Be Packaged In:

Child-Resistant Packaging	Unit Packaging	Water Soluble Packaging	2. Type of Container
[ ] Yes [x] No	[ ] Yes [x] No	[ ] Yes [x] No	[ ] Metal [x] Plastic [ ] Glass [ ] Paper [ ] Other (Specify)
* *Certification must be submitted*	If "Yes" Unit Packaging wgt. / No. per container	If "Yes" Package wgt / No. per container	

3. Location of Net Contents Information	4. Size(s) Retail Container	5. Location of Label Directions
[ ] Label [x] Container	Various	[x] container

6. Manner in Which Label is Affixed to Product [x] Lithograph Paper glued Stenciled [ ] Other _____

Section - IV

1. Contact Point *(Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)*

Name	Title	Telephone No. (Include Area Code)
John R. French, Ph.D.	Senior Regulatory Manager	770-805-3226

Certification

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowlingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

6. Date Application Received (Stamped)

2. Signature	3. Title
John R. French (Digitally signed by John R. French DN: cn=John R. French, o=Arch Chemicals, Inc, ou, email=JRFrench@archchemicals.com, c=US Date: 2008.07.07 14:30:16 -04'00')	Senior Regulatory Manager
4. Typed Name	**5. Date**
John R. French, Ph.D.	July 7, 2008

EPA Form 8570-1 (Rev. 3-94) Previous editions are obsolete. White - EPA File Copy (original) Yellow - Applicant Copy

[All text in square brackets [AAA] is optional and may/may not be included on final label]

{All text in rounded brackets {AAA} is for information purposes and will not appear on final label}

{FRONT PANEL- MANDATORY LANGUAGE FOR ALL LABELS}

HTH 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 before use.

FIRST AID: {Added Format consistent with PR Notice 2001-1}
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

Net Wt. xxx

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

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS DANGER: Highly corrosive. Causes skin and eye damage. May be fatal if swallowed. Irritating to nose and throat.

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

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: {Optional statements – usage depends on whether or not refillable or nonrefillable containers are used and whether or not product is packaged for household/residential use only}

{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}

S/23

[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 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.]

[{On ICM products only – EPA Label Manual, chap. 13 p. 5} Do not contaminate food or feed by storage or disposal or cleaning of equipment.]

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.

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

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

[Visit [brand] : www.xxx.com]

{Optional}
[

]

EPA Reg. No. 1258-427
EPA EST. NO. XXXXX
[Superscript Used in Lot Number]

{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

{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]
[68% 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]
[Good for all pool surfaces]
[Use only with Pulsar chlorinator systems]
[Use only with Constant Chlor chlorinator systems]
[Patented Formulation for Reduced Maintenance]
[Chlorinating granules for multiple pool and spa uses]

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{SWIMMING POOL USES}

{Use 1-Pools}

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

[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.**]**

READ ALL PRECAUTIONARY STATEMENTS BEFORE USE.

{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 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 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 **[**HTH**]** [brand name] 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 package. Allow 30 minutes for product to disperse. Test free available chlorine residual with a pool test kit. Repeat treatment as needed.

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[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 [HTH] (brand name) 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" section 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 [HTH] [brand name] algaecide product regularly. Follow label directions on the algaecide.**]**

{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 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]

9/23

{SPA / HOT TUB USES}

{Use 2-Spas}

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

[How To Use: For best results, see "WATER BALANCE" section below before treatment. Maintain these conditions for proper operation by frequent testing with a test kit. Do not allow cyanuric acid level to exceed 100 ppm. It is recommended that spas and hot tubs be drained every 30-90 days, more often under heavy use. Consult manufacturer's recommendations concerning the compatibility of chlorine sanitizers with their equipment. Some oils, lotions, fragrances, cleansers, etc., may cause foaming or cloudy water and may react with chlorine sanitizers to reduce their efficacy. If circulation is low, stir water after addition of chlorine or other chemicals.

[Water Balance: For best product performance, 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 parts per million (ppm). Maintain calcium hardness above 200 ppm. Use a reliable test kit that measures all these ranges. Use [HTH] [brand name] [Spa] Care Products to make adjustments. Follow label directions for each product. **]** Re-entry into treated spas is prohibited above levels of 5 ppm due to risk of bodily harm.

[Opening Your Spa] Startup (Freshly Filled): For best results, see "WATER BALANCE" section above before treatment. Turn on circulation system and ensure that it is operating properly. Add one (1) ounce of this product to provide approximately 10 ppm available chlorine for each 500 gallons of water. Check the free available chlorine (FAC) and if less than 4-5 ppm, repeat as needed.

[Routine Chlorination For] Regular Use: For best results, see "WATER BALANCE" section above before treatment. Turn on circulation system and ensure that it is operating properly. Scatter 0.3-0.5 ounces of this product per 500 gallons over the surface of the water. Test for free available chlorine and add additional product if necessary to maintain 3–5 ppm FAC while unit is in use.

[Shock Treatment: After each use, shock treat with one (1) ounce of this product to provide approximately 10 ppm available chlorine per 500 gallons of water, to control odors and algae. Repeat as needed.**]**

[Algae Control: For preventative algae control, use your preferred [HTH] [brand name] [spa] algaecide product regularly. Follow the label directions on the algaecide.**]**

Extended Non-use Period: For best results, see "WATER BALANCE" section above before treatment. During extended non-use periods when the unit is not being used add 1.1 ounces of this product per 500 gallons twice a week with the circulation system running or as needed to maintain 3-5 ppm free available chlorine.**]**

10/23

{Optional}
[

]

{Optional}
[

ARCH

]

HELPLINE
866-HTH-POOL
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]

{INDUSTRIAL/COMMERCIAL WATER USES}

{Use 3}
[HUBBARD AND IMMERSION TANKS - Add 0.5 oz. of this product per 100 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 0.5 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. Not approved for use in the State of California.]

[HYDROTHERAPY TANKS – Add 1 oz. of this product per 1,000 gallons of water to obtain a minimum chlorine residual of 1 ppm, as determined by a suitable chlorine test kit, after satisfying any chlorine demand. 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.]

{Use4} [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 oz. of this product with 40 gallons of water. If no test kit is available, 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. 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.

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Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Workers Protection Standard.
The Restricted-Entry Interval (REI) is 0 days when using this product.
There are no posting or notification requirements when using this product.
Personal Protective Equipment should be worn as described under the "Precautionary Statements" section of this label.

~~**[POST-HARVEST PROTECTION** - Potatoes can be sanitized after cleaning and prior to storage by spraying with a sanitizing solution at a level of 1 gallon of sanitizing solution per 1 ton of potatoes. Using a suitable chemical feed dispenser and test kit, dissolve and dose the chlorinated solution until a concentration of 500 ppm is achieved.]~~
BEES - Disinfect leaf cutting bee cells and bee boards by immersion in a solution containing 1 ppm available chlorine for 3 minutes. Allow cells to drain for 2 minutes and dry for 4 to 5 hours or until no chlorine odor can be detected. This solution is made by thoroughly mixing ¼ Tsp. of this product to 200 gallons of water. The bee domicile is disinfected by spraying with a 0.1 ppm solution until all surfaces are thoroughly wet. Allow the domicile to dry until all chlorine odor has dissipated.

FOOD EGG SANITIZATION – Thoroughly clean all eggs. Thoroughly mix 1 oz. of this product with 20 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 1 oz. of this product in 200 gallons of water to make a sanitizing solution of 25 ppm available chlorine. After draining the tank, submerge fruit or vegetables for 2 minutes in a second wash tank containing the recirculating sanitizing solution. Spray rinse vegetables with the sanitizing solution prior to packaging. Rinse fruit with potable water only prior to packaging.

COMMODITY FRUIT & VEGETABLE WASHING: Wash fruits and vegetables to remove organic matter; then treat as noted below.

Table of Recommended Levels and Use Dilutions for Available Chlorine

Commodity	Usage Dilution dry oz. added to 100 gal. of water	Available Chlorine (ppm)	Contact Time
Apple	3.1 to 4.1	150-200	45-90 sec. (dump tank) 5-15 sec. (spray)
Artichoke	2.1 to 3.1	100-150	5-15 sec. (spray)
Asparagus	2.6 to 3.1	125-150	5-15 sec. (spray) 20-30 min. (hydrocooler)
Brussels Sprouts	2.1 to 3.1	100-150	5-15 sec. (spray)
Carrots	2.1 to 4.1	100-200	1-5 min. (dump tank) 1-5 min. (flume)
Cauliflower	6.2 to 8.2	300-400	5-15 sec. (spray)

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Celery	2.1 to 2.3	100-110	5-15 sec. (spray)
Cherry	1.5 to 2.1	75-100	5-15 sec. (spray)
Chopped Cabbage[1]	1.6 to 2.1	80-100	5-15 sec. (spray)
Chopped Lettuce[1]	1.6 to 2.1	80-100	5-15 sec. (spray)
Citrus Fruits	0.8 to 1.5 0.6 to 1.0 2.1 to 4.1	40-75 30-50 100-200	5-15 sec. (spray) 2-3 min. (dump tank) 3-5 min. (drench)
Cucumber	6.2 to 7.2	300-350	5-15 sec. (spray)
Green Onions	1.5 to 2.5	75-120	5-15 sec. (spray)
Melons	2.1 to 3.1 0.6 to 1.5	100-150 30-75	5-15 sec. (spray) 20-30 min. (hydrocooler)
Pears ~~(without buffer)~~	6.2 to 8.2	300-400	2-3 min. (dump tank)
Peppers	6.2 to 8.2 2.1 to 2.8	300-400 100-135	5-15 sec. (spray) 2-5 min. (dump tank)
Potatoes	0.6 to 2.1 4.1 to 6.2 2.1 to 4.1	30 to 100 200 to 300 100 to 200	2-5 min. (dump tank) 2-5 min. (flume) 5-30 sec. (spray)
Radishes	2.1 to 3.1	100-150	5-15 sec. (spray)
Stonefruits (Cherries, Peaches, Nectarines, and Plums)	0.6 to 1.5 1.0 to 2.1	30-75 50-100	Hydrocooler 5-15 sec. (spray)
Sweet Potatoes (Ipomoea batatas) - to control & reduce spread of post-harvest soft rot organisms	3.1 to 4.1	150 to 500	2-5 min. (spray or dip; change the solution after one hour, or as needed)
Tomatoes	6.2 to 7.2 2.1 to 3.1	300 to 350 100 to 150	2-3 min. (tank) 5-15 sec. (spray)

[1] **Note: After treatment the adhering water must be removed by a centrifugation process.**

SEEDS - To control bacterial spot on Pimento seeds, initially remove moist seeds from ripe fruits. To control surface fungi and bacteria on tomato seeds initially wash seeds. Immediately soak seeds in 39,000 ppm solution for 15 minutes with continuous agitation. After treatment rinse seeds in potable water for 15 minutes. Dry seeds to normal moisture. The solution may be made by mixing 8 oz. of this product with 1 gallon of water.

MUSHROOMS - To control bacterial blotch (Pseudomonas tolaasii), use a 100 to 200 ppm solution prior to watering mushroom production surfaces. This solution may be made by mixing 0.2 to 0.4 oz. of this product with 10 gallons of water. First application should begin when pins form, and thereafter, between breaks on a

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need basis depending on the occurrence of bacterial blotch. This product may be applied directly to pins to control small infection foci. Apply 1.5 to 2.0 oz. per square foot of growing space.

~~**POST-HARVEST ROOTS** - To control and reduce the spread of soft rot causing organisms in water and on sweet potatoes (Ipomoea batatas), spray or dip the potatoes with a 150 to 500 ppm solution for 2 to 5 minutes. Thoroughly mix 0.3 to 1.0 oz. of this product per 10 gallons of water to obtain this solution. Monitor the chlorine concentration and change the solution after one hour or as needed.]~~

{Use 22} **[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. Not approved for use in the State of California.

CONDITIONING LIVE OYSTERS - Thoroughly mix 1 oz. of this product in 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. Not approved for use in the State of California.

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.]

{Use 23} **[SANITIZATION OF DIALYSIS MACHINES** - Flush equipment thoroughly with water prior to using this product. Thoroughly mix 7 oz. of this product/ 60 gallons of water to obtain at least 600 ppm available chlorine. Immediately use this product in the hemodialysate system allowing for a minimum contact time of 15 minutes at 20°C. Drain system of the sanitizing solution and thoroughly rinse with water. Discard and DO NOT reuse the spent sanitizer. Rinsate must be monitored with a suitable test kit to insure that no available chlorine remains in the system.

This product is recommended for decontaminating single and multipatient hemodialysate systems. This product has been shown to be an effective disinfectant (virucide, fungicide, bactericide, pseudomonicide) when tested by AOAC and EPA test methods. This product may not totally eliminate all vegetative microorganisms in hemodialysate delivery systems due to their construction and/or assembly, but can be relied upon to reduce the number of microorganisms to acceptable levels when used as directed. This product should be used in a disinfectant program which includes bacteriological monitoring of the hemodialysate delivery system. This product is NOT recommended for use in hemodialysate or reverse osmosis (RO) membranes. Consult the guidelines for hemodialysate systems available from the Hepatitis Laboratories, CDC, Phoenix, AZ 85021.]

{Use 24} **[TOILET BOWL SANITIZERS** These products are marketed as individual packages for placement in the toilet. Therefore, use directions are not appropriate.] {Claims are limited to sanitization. No claims for disinfection are permitted}

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{Use 25} **[ASPHALT OR WOOD ROOFS AND SIDINGS** - To control fungus and mildew, first remove all physical soil by brushing and hosing with clean water, and apply a 5,000 ppm available chlorine solution. Mix 1 oz. of this product per gallon of water and brush or spray roof or siding. After 30 minutes, rinse by hosing with clean water.]

{Use 26} [BOAT BOTTOMS - To control slime on boat bottoms, sling a plastic tarp under boat, retaining enough water to cover the fouled bottom area, but not allowing water to enter enclosed area. This envelope should contain approximately 500 gallons of water for a 14 foot boat. Add 3.5 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 0 ppm, as determined by a swimming pool test kit.]

{Use 27} **[ARTIFICIAL SAND BEACHES** - To sanitize the sand, spray a 500 ppm available chlorine solution containing 0.1 oz. of this product per gallon of water at frequent intervals. Small areas can be sprinkled with a watering can.]

{Use 28} [FOOD PROCESSING PLANTS - TREATMENT OF FEDERALLY INSPECTED MEAT & POULTRY PLANT POTABLE WATER SUPPLIES - **Solutions of this product containing 1% available chlorine will effectively disinfect the water supply in Federally Inspected Meat & Poultry Plants. The solutions should be fed into the water supply by a hypochlorinator on the intake side of the pump. An available chlorine residual of 0.1 to 0.6 ppm must be maintained throughout the water distribution system to assure adequate disinfection. A regular testing program should be initiated to make sure that the proper chlorine residuals are present at all times. To make a 1% solution, mix 10 ounces of this product into 5 gallons of water.**

[COOLING WATER IN CANNERIES - Solutions of this product containing 1% available chlorine will sanitize cooling water, protect canned goods from contamination and spoilage and prevent staining of cans. The solution should be fed into cooling tanks or channels to reach a concentration of 2 ppm available chlorine. Check every two or three hours to be sure that an available chlorine residual of 2 ppm is maintained throughout the cooling system. To make a 1% solution, mix 10 ounces of this product into 5 gallons of water.]

POULTRY DRINKING WATER - Spray or flush with a solution containing 1 oz. of this product for every gallon of water. Treat poultry drinking water to a dosage of 1 to 5 ppm available chlorine by adding 1 to 5 oz. of this product per 5,000 gallons of water. Not approved for use in the State of California.

FISH FILLETING - Eviscerated and degilled fish removed from the fishing vessel are placed in a wash tank of seawater or fresh water which has been treated with enough product to produce a chlorine residual of 25 ppm, as determined by a test kit. Remove fish from treated water 24 to 48 hours before filleting. After scalin the fish are again washed in a 25 ppm solution, and are ready for filleting.

PECAN CRACKING AND DYEING - Prepare a 1000 ppm available chlorine soaking solution by adding 1 oz. of this product for each 5 gallons of water to obtain a 1000 ppm available chlorine content. Soak for a minimum of 10 minutes. After removal, age pecans for 24 hours. Before bleaching, pecans are placed in a rotary cleaner where they are washed, drained, and soaked in a 2% sulphuric acid bath at 80 to 90°F for 1 minute. Transfer to a solution containing 100 oz. of this product for each 100 gallons of water (5000 ppm). After 4 to 8 minutes, they are drained and washed in a 1% sulphuric acid bath at 80 to 90°F. They are then dried.]

{Use 29} [CONTROL OF BACTERIA, ALGAE, SLIME BUILD-UP AND CLOGGING IN SPECIFIED IRRIGATION SYSTEMS- HTH ® DRY CHLORINATOR GRANULAR (brand name) may be mixed with water to produce a chlorine solution. Always add Chlorinator Granules to water, NEVER add water to granular product. To produce a 0.5% available chlorine solution, add 1.0 dry oz. of 68% nominal Chlorinator Granular to one (1) gallon of water (for 73% nominal Chlorinator Granules, add 0.90 dry oz.). This solution may be then fed by gravity, or a metering pump to the irrigation system water to achieve the desired available chlorine strength in the water. The Application Rates section provides the levels of free residual chlorine needed to prevent or address bio-fouling occurring in drip/trickle irrigation systems. When utilizing a metering pump, refer to the instruction manual for varying the output of the pump. This product is to be applied through drip/trickle sprinkler irrigation systems only for agricultural crops only where this manner of use will not cause crop damage.

APPLICATION RATES

If the irrigation water has high levels of nutrients causing bacterial, algal, or other bio-fouling that reduces system performance, continuous use of this product may be necessary. The recommended level of free residual chlorine for continuous feed is 1 to 2 ppm measured at the end of the farthest lateral using a good quality test kit for free chlorine (also called "free residual" or "free available" chlorine).*

Periodic shock treatments at a higher available chlorine rate of up to 20 ppm free residual may be appropriate where bacteria and/or algae clogging and build-up are not managed by maintaining a continuous residual. The frequency of the shock application depends upon the frequency and extent of bio-clogging.

Superchlorination, bringing concentrations to as much as 100 ppm total available chlorine, is recommended for reclaiming low-volume irrigation systems if clogged by algae and bacterial slimes. Set the metering pump to deliver 100 ppm in the drip system and monitor the free chlorine residual at the end of the farthest latera As soon as it is established that the free residual reading is between 10-20 ppm, shut the system down and leave it undisturbed for up to 24 hours. Then flush al submains and laterals with fresh water. Superchlorination will not dissolve/remove scale or inorganic sediment fouling.

***Note**: To correctly establish the dose setting required, it is necessary to measure the free chlorine concentration (ppm) at the end of the treated increment in the field and adjust the dose setting until the desired free chlorine concentration is obtained. This is because contaminants in the water may consume available chlorine resulting in a concentration that is less than the concentration desired as specific above. Only experience can establish the actual metering pump settings required to provide the amount of free chlorine at the end of the farthest lateral (and consequent treatment of the irrigation system). Normally the treatment level at the end of the farthest lateral will be 1-2 ppm free chlorine.

GENERAL APPLICATION INSTRUCTIONS

- Chlorination should be started during irrigation, near the end of the irrigation sequence, but early enough to establish the desired free chlorine concentration throughout the system being treated.
- Apply this product upstream of the filter to help keep filter clean.
- Determine the level of free chlorine as described above, using a free chlorine test kit. Allow sufficient time to achieve a steady reading.
- DO NOT apply this product when fertilizers, herbicides, and insecticides are being injected since they will consume the available chlorine and may produ toxic reaction products.
- Shut down the product feed as soon as the irrigation water is switched to the next irrigation sector. Leave the treated water residing in the section that has been shut down.
- Refer to the metering pump use instructions as needed.

SENSITIVE PLANT SPECIES

Certain plants, including various species of trees, flowers, shrubs, agronomic crops, fruits, and vegetables are adversely affected by chlorination irrigation. The use of this product can impact the growth, appearance, and health of the plants.

Begonias, geraniums and other ornamental plant species are known to be sensitive to continuous chlorination at levels of 1-2 ppm free chlorine. Plant species such as tomato, lettuce, broccoli, and petunia are sensitive to periodic chlorination levels of 10-20 ppm free chlorine.

If uncertain of a plant's tolerance, consult an agronomist or a support agency or use an alternate method to remove bio-fouling from the irrigation system.

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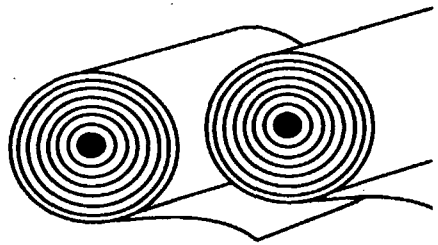
{brand name substituted for specific product name here and elsewhere on label} *[BRAND NAME]* for Treatment of:
PULP & PAPER



Not approved for use in the State of California.

Advantages of *[BRAND NAME]* : *[BRAND NAME]*, *which contains 68 % available chlorine, is a granular or tablet form of calcium hypochlorite, one of the most effective sanitizers known. It is convenient, easy to use and handle; doesn't require expensive, complex metering equipment or large storage tanks, and doesn't lose strength rapidly during storage. Be sure to comply with all government regulations for use.*

Papermaking Industry
In general, ***[BRAND NAME]*** is an effective bleaching agent for all the common paper dyes. To be sure that a particular dye is bleachable with *CCH* solutions, the dye must either be identified properly or tested for bleachability.

How to Identify Dyes:
In all, about 100 different types of dyestuffs are used for coloring paper. But every manufacturer has its own name for each generic dye - resulting in thousands of different trade names.

A comprehensive directory, the *Colour Index*, is published by the *American Association of Textile Chemists and Colorists* (AATCC), providing a cross-reference of generic and trade names. Volume 5 lists dyes generically, each with a color index number that corresponds to every trade name for that particular dye. So if t generic type is known, all trade names can be found and vice versa.

Figure 1 lists some of the common generic paper dyes which can be bleached with ***[BRAND NAME]***. (Listings appear just as they do in the AATCC *Colour Index*.)

How to Test for Bleachability:
When dyes in colored broke are unidentified, the following simple test will determine whether or not ***[BRAND NAME]*** will be an effective bleaching agent.
Make up a small quantity of 3% ***[BRAND NAME]*** solution and add a few handfuls of broke. If all color is destroyed (even in mixed color batches), the entire batch should bleach out when treated with ***[BRAND NAME]*** .
The Bleaching Process:
Quantities of water and ***[BRAND NAME]*** necessary for effective bleaching should be determined by the dry weight of the broke to be processed. As a rule, the available chlorine content of solutions should be about 2% of the dry broke weight.

Example:
[One thousand kgs or] 2,500 lbs. of broke will require [20 kgs (1000 x .02) or]50 pounds (2,500 x .02) of available chlorine. And since ***[BRAND NAME]*** contains 65% available chlorine, [31 kgs (20 kgs divided by 65%) or] 77 lbs. (50 divided by 65%) will be required to deliver the proper amount of chlorine.

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To assure the proper consistency of the final pulp, the weight of the dry broke should be 5 to 6% of the total weight of the broke and water. To attain this consistency, use 20 liters or 2 gallons of water for every kg or pound of dry broke. Thus, to bleach [10,000 kgs or] 2,500 pounds of dry broke [20,000 liters or] 5,000 gallons of water will be needed.

Ideally, ***[BRAND NAME]*** should be introduced as a solution through a perforated pipe or sparger arrangement. Otherwise, it should be added evenly with a clean, stainless steel scoop. Do not handle ***[BRAND NAME]*** with bare hands.

Storable stock solutions prepared in volume should contain [4.6 kgs or] 10 lbs. of ***[BRAND NAME]*** for every [100 liters or] 26 gallons of water. Make sure mixing water is warm. Store the stock solution in plastic containers.

If a solution is used, benchmark proportions for the full charge should be adjusted, as follows, to account for the water added with the ***[BRAND NAME]***:

[100 kgs or] 250 lbs dry broke
[1,600 liters or] 480 gallons water
[67 liters or] 20 gallons ***[BRAND NAME]*** stock solution

The actual bleaching process can be accomplished in a conventional pulping unit. To prepare the bleach run, add the proper amount of water required by the dry broke weight and heat to 60°C or 140°F. (If water is too cool, the solution will not activate properly. Under 21°C or 70°F, bleaching may not occur.)

Once the water is heated, broke should be added and pulped. ***[BRAND NAME]*** , either in solution or dry, should then be introduced as quickly and evenly as possible during the beating cycle.

If colors are relatively light or weak, the proportion of ***[BRAND NAME]*** to dry broke weight may be reduced. Experience will dictate the most economical quantity to use in each case. It is useful to log actual proportions by color, so that future batches of the same or similar shades can be treated routinely.

If necessary, the final step in the bleaching process is to reduce the pH of the pulped mixture to 5 or 6. At the end of the beating cycle, use 0.5% sodium acid sulfate (nitre cake) or dilute sulfuric acid. (Do not use alum, since it tends to set extraneous foreign matter on the pulp.) Pulp bleached with ***[BRAND NAME]*** often reused without draining or washing. However, draining reduces residual matter which may discolor the pulp; and washing ensures an even brighter, cleaner product.

Because the free chlorine from ***[BRAND NAME]*** is almost completely consumed in the bleaching process, no antichlors (e.g. sodium thiosulfate, sodium sulfite) need be added at any point in the procedure.

Figure 1
Common Paper Dyes Bleachable with *[BRAND NAME]*

Generic Name	Colour Index Number	Generic Name	Colour Index Number	Generic Name	Colour Index Number
Acid Red		*Basic Orange*		*Direct Blue*	
14	14720	2	11270	6	22610
88	15620	*Acid Yellow*		14	23850
27	16185	36	13065	8	24140

18	16255
1	18050
73	27290
Direct Red	
20	15075
28	22120
17	22150
37	22240
1	22310
2	23500
75	25380
81	28160
23	29160
Basic Red	
1	45160
2	50240
Acid Orange	
7	15510
8	15575
Direct Orange	
8	22130

3	47005
2	47010
Direct Yellow	
4	24890
Basic Yellow	
2	41000
Acid Green	
3	42085
9	42100
Direct Green	
6	30295
Basic Green	
4	42000
1	42040
Acid Blue	
22	42755
45	63010

1	24410
Basic Blue	
26	44045
9	52015
Acid Violet	
17	42650
Basic Violet	
1	42535
23	42555
5	50205
Direct Brown	
2	22311
1	30045
6	30140
Basic Brown	
1	21000
Acid Black	
1	20470
2	50420
Direct Black	
38	30235

Please refer to the Material Safety Data Sheet (MSDS) for complete information on Storage and Handling, Toxicological Properties, Personal Protection, First Aid, Spill and Leak Procedures, and Waste Disposal. To order an MSDS, call the Arch Chemicals Inc. sales office listed below or the MSDS Control Group at (800) 511-MSDS. Before using or handling this product, the MSDS should be thoroughly reviewed.

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 oz. of this product with 40 gallons of water. If no test kit is available, 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 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 a 200 ppm available chlorine sanitizing solution equal to 110 % of volume capacity of the equipment by mixing the product in a ratio of 1 oz. product with 20 gallons of water. Pump solution through the system until full flow is obtained at all extremities, the system is completely filled with the sanitizer and all air is removed from the system. Close drain valves and hold under pressure for at least 2 minutes to insure contact with all internal surfaces. Remove some cleaning solution from drain valve and test with a chlorine test kit. Repeat entire cleaning/sanitizing process if effluent contains less than 50 ppm available chlorine.

CLEAN-IN-PLACE METHOD - Thoroughly clean equipment after use. Prepare a volume of a 200 ppm available chlorine sanitizing solution equal to 110 % of volume capacity of the equipment by mixing the product in a ratio of 1 oz. product with 20 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.

COARSE SPRAY 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 1 oz. product with 20 gallons of water. Prepare a 600 ppm solution by thoroughly mixing the product in a ratio of 3 oz. 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. Thoroughly spray 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.]

{Use 5} [SANITIZATION OF POROUS FOOD CONTACT SURFACES:
RINSE METHOD - Prepare a 600 ppm solution by thoroughly mixing 3 oz. of this product with 20 gallons of water. Clean surfaces in the normal manner. Rinse all surfaces thoroughly with the 600 ppm solution, maintaining contact for at least 2 minutes Prepare a 200 ppm sanitizing solution by thoroughly mixing 1 oz. of this product with 20 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, 3 oz. of this product with 20 gallons of water. Clean equipment in the normal manner. Prepare a 200 ppm sanitizing solution by thoroughly mixing 1 {typo error changed] oz. of this product with 20 {typo error changed} gallons of water. Prior to using, immerse equipment in the 200 ppm sanitizing-solution for at least 2 minutes and allow the sanitizer to drain. Do not rinse and do not soak equipment overnight.

COARSE SPRAY 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 3 oz. 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. Thoroughly spray 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 1 oz. of this product with 20 gallons of water.]

{Use 6} [**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 – 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 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.]

{Use 7} [**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 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 8} [**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 9} [**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.

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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 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 0.5 ppm after 15 minutes contact time.]

{Use 10} [SEWAGE AND WASTEWATER TREATMENT: EFFLUENT SLIME CONTROL – Apply a 100 to 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 11} [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.] 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.

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EMERGENCY DISINFECTION – When boiling of water for 1 minute is not practical, water can be made potable by using this product. Prior to addition of the sanitizer, remove all suspended material by filtration or by allowing it to settle to the bottom. Decant the clarified, contaminated water to a clean container and add 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 12} **[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 ne 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 13} **[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.

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