

June 30, 2005

Joel S. Schwartz  
Occidental Chemical Corporation  
520 Monsanto Avenue  
Sauget, IL 62206

Subject: ACL 90 B EUP Chlorinating Granules  
EPA Registration No. 935-59  
Application Date: April 6, 2005  
Receipt Date: April 7, 2005

Dear Mr. Schwartz:

The following amendment submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, is accepted with a condition.

Labeling Changes

1. Correct a dilution calculation to read 6 ounces of product added to 10 cubic feet of water for 500 ppm available chlorine.
2. Remove the "Ponds" use site from the Emergency Disinfection section.

**Condition**

Align the Ingredient Statement as follows:

ACTIVE INGREDIENT:  
 Trichloro-s-triazinetrione . . . . . 99.9%  
 OTHER INGREDIENTS . . . . . 0.1%  
 TOTAL . . . . . 100.0%

**General Comments**

A stamped copy of the labeling accepted with comments is enclosed. Submit one copy of your final printed labeling before distributing or selling the product bearing the revised labeling.

CONCURRENCES

SYMBOL	1510C							
SURNAME	Hanson							
DATE	6-30-05							

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

Sincerely, -

Emily H. Mitchell  
Product Manager - Team 32  
Regulatory Management Branch II  
Antimicrobials Division (7510C)

**OxyChem®**  
**ACL® 90 EUP**  
**CHLORINATING COMPOSITION**

**ACTIVE INGREDIENT:**

Trichloro-s-triazinetriene.....

**OTHER INGREDIENTS.....**

**TOTAL.....**

ACCEPTED  
 99.9%  
 with COMMENTS  
 EPA Letter Dated:  
 100%

JUN 30 2005

Provides 90% Available Chlorine

**KEEP OUT OF REACH OF CHILDREN**

Under the Federal Insecticide,  
 Fungicide, and Rodenticide Act,  
 amended for the pesticide,  
 registered under EPA Reg. No.

**DANGER**

935-59

<b>FIRST AID</b>	
<b>If in eyes</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If swallowed</b>	<ul style="list-style-type: none"> <li>• Call poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>If inhaled</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
<b>If on skin or clothing</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>HOT LINE NUMBER</b>	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact <b>1-800-733-3665</b> for 24 hour emergency medical treatment information.	
<b>NOTE TO PHYSICIAN</b>	
Probable mucosal damage may contraindicate the use of gastric lavage.	

See side panel for *Directions for Use*.

EPA Reg. No. 935-59  
 EPA Est. No. 935-IL-1  
 58401-IL-1

**Occidental Chemical Corporation**  
 Dallas, Texas 75380  
 972-404-3800

HMIS Rating System: Health 3 Flammability 0 Reactivity 2

**Net Wt. 50 lbs. / 22.7 kg.**

**PRECAUTIONARY STATEMENTS****HAZARD TO HUMANS AND DOMESTIC ANIMALS****DANGER**

**CORROSIVE:** Causes irreversible eye damage or skin burns. May be fatal if swallowed. Harmful if absorbed through skin or inhaled. Do not get in eyes, on skin or on clothing. Avoid breathing dust. Wear goggles or face shield. Wear protective clothing and rubber gloves. Wash thoroughly with soap and water after handling and before eating, drinking or using tobacco. Remove contaminated clothing and wash clothing before reuse.

**ENVIRONMENTAL HAZARD**

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

**PHYSICAL OR CHEMICAL HAZARD**

Strong oxidizing agent. Contact with water slowly liberates irritating and hazardous chlorine containing gases. Decomposes at temperatures above 437°F (225°C) with liberation of harmful gases. When ignited, will burn with the evolution of chlorine and equally toxic gases.

Never add water to product. Always add product to large quantities of water. Use clean, dry utensils. Do not add this product to any dispensing device containing remnants of any other product. Such use may cause a violent reaction leading to fire or explosion. Contamination with moisture, organic material, or other chemicals may start a chemical reaction with generation of heat, liberation of hazardous gases, and possible fire and explosion.

**IN CASE OF FIRE OR SMOKE:** Call the fire department. Do not attempt to extinguish the fire without a self contained breathing apparatus (SCBA). Do not let the fire burn. Flood with copious amounts of water. Do not use ABC or other dry chemical extinguishers since there is the potential for a violent reaction.

**IN CASE OF CONTAMINATION OR DECOMPOSITION:** Do not reseal container. Follow disposal instructions on label.

## DIRECTIONS FOR USE

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

This product may be used in accordance with the directions for use as a microbiocide/microbiostat (slime forming bacteria, fungi, algae), disinfectant, sanitizer, fungicide, algacide and bacteriostat in the following use sites: aquatic non-food industrial, aquatic non-food residential, indoor food, indoor non-food, indoor medical and indoor residential.

### AQUATIC NON-FOOD INDUSTRIAL:

#### RECIRCULATING WATER SYSTEMS

This product is intended for the control of bacteria, fungi and algae in the following aquatic sites: Air Washer Water Systems, Commercial/Industrial Water Cooling Systems, Evaporative Condenser Water Systems, Secondary oil recovery injection water, Heat Exchange Water Systems, Lakes/Ponds/Reservoirs (Without Human or Wildlife Use), Industrial Scrubbing Systems, Oil recovery drilling muds/packer fluids.

This product may be added to the system by direct placement into the water at a point where the product will be uniformly mixed with water. The frequency of feeding and duration of the treatment will depend on the severity of the contamination. Badly fouled systems must be cleaned before treatment begins.

#### Intermittent or slug method

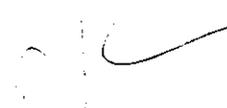
**Initial Dose:** When the system is noticeably fouled, add this product at the rate of 0.1 to 0.5 pounds per 1000 gallons (12 to 60 grams per 1000 liters) in the system to achieve 0.5-10 ppm (mg/L) available chlorine, as measured by a suitable test kit. Repeat dosage until residual is achieved.

**Subsequent Dose:** When microbial control is evident, add this product at the rate of 0.02 to 0.1 pounds per 1000 gallons (2.4 to 12 grams per 1000 liters) in the system to achieve 0.5-1 ppm (mg/L) available chlorine, as measured by a suitable test kit. Repeat periodically as needed to maintain control.

#### Continuous feed method

**Initial Dose:** When the system is noticeably fouled, add this product at the rate of 0.1 to 0.5 pounds per 1000 gallons (12 to 60 grams per 1000 liters) in the system to achieve 0.5-10 ppm (mg/L) available chlorine, as measured by a suitable test kit. Repeat dosage until residual is achieved.

**Subsequent Dose:** When microbial control is evident, add this product at the rate of 0.02 to 0.1 pounds per day per 1000 gallons (2.4 to 12 grams per day per 1000 liters) in the system to maintain 0.5-1 ppm (mg/L) available chlorine, as measured by a suitable test kit.



**AQUATIC NON-FOOD INDUSTRIAL:****SEWAGE WASTE WATER SYSTEMS**

This product is intended for the control of bacteria, fungi and algae in sewage waste water systems. This product provides rapid disinfection of primary, secondary and tertiary waste water treatment systems.

**Dose Rate:** Add this product at the rate of 0.02 to 0.5 pounds per 1000 gallons (2.4 to 60 grams per 1000 liters) in the system to achieve 0.2-3 ppm (mg/L) available chlorine, as measured by a suitable test kit, at the injection point in the disinfection contact chamber. Adjust the dosage to achieve disinfection and minimize the halogen concentration at the exit of the contact chamber.

**FOR ONCE-THROUGH WATER SYSTEMS**

This product is intended for control of bacteria, fungi and algae in open or closed cycle, fresh or salt water, once-through cooling systems.

**Initial Dose:** When the system is noticeably fouled, add this product at the rate of 0.02 to 0.5 pounds per 1000 gallons (2.4 to 60 grams per 1000 liters) of water treated to achieve 0.2-10 mg/L total available chlorine, as measured by a suitable test kit, in the water treated. Repeat dosage until residual is achieved.

**Subsequent Dose:** When microbial control is evident, add this product at the rate of 0.02 to 0.1 pounds per 1000 gallons (2.4 to 12 grams per 1000 liters) of water treated to achieve 0.2-5 mg/L total available chlorine, as measured by a suitable test kit, in the water treated. Repeat periodically as needed to maintain control.

## AQUATIC NON-FOOD RESIDENTIAL:

### SWIMMING POOL WATER SYSTEMS

This product is intended for use in controlling bacteria and algae in swimming pools. This slow dissolving product is to be used in suitable granular chlorinating devices. DO NOT add directly to the swimming pool.

Re-entry into treated swimming pools is prohibited above levels of 3 ppm (mg/L) available chlorine.

**Start up** - Before using this product, make sure that the filtration system is clean and operating properly. Adjust the pH of the water to the range of 7.2-7.6 using suitable products and a reliable test kit. Adjust the alkalinity of the water to a minimum of 125 ppm (mg/L), based on the test kit reading.

Shock (super-chlorinate) the pool with an appropriate product, followed by maintenance treatment.

**Shock treatment** - The pool water should be super-chlorinated or shocked every seven days or whenever the *combined* chlorine level is above 0.5 ppm (mg/L). *Combined* chlorine is the difference between *total* and *free* chlorine, as measured by a suitable test kit.

Add a sufficient amount of an appropriate *shock* product directly to the surface of circulating water to raise the available chlorine level to 5-6 ppm (mg/L), based on test kit readings. For example, the addition of 10 ounces of sodium dichloro-s-triazinetrione per 10,000 gallons of water (7.5 grams per 1,000 liters) will provide approximately 5 ppm (mg/L) of available chlorine. If the combined chlorine reading is not below 0.5 ppm (mg/L) and the water has not been restored to its normal clarity, repeat the shock treatment described above.

Do not enter water until free available chlorine reading is below 3 ppm (mg/L), combined chlorine is below 0.5 ppm (mg/L) and the water is restored to its normal clarity.

**Maintenance treatment** - Add this product to the granular feeder (or chlorinating device). Adjust the feeder to maintain the free available chlorine level in the water at 1-3 ppm (mg/L) as indicated by a reliable test kit. Periodically refill feeding device with enough product to assure a constant treatment level of 1-3 ppm (mg/L) available chlorine. Weather and usage effect sanitizer levels. In addition, some oils, lotions, fragrances, cleaners, etc. may cause foaming or cloudy water as well as reduce the efficiency of this product. Maintain the pH at 7.2-7.6 and the alkalinity at a minimum of 125 ppm (mg/L).

When the total dissolved solid (TDS) reaches 3000 ppm (mg/L) or whenever the water becomes difficult to manage, the water should be drained and fresh water added to the pool.

**Winterizing** - Thoroughly clean and vacuum the pool. Empty the feeder of all product. While the water is still clear and clean, add 16 ounces of an appropriate *shock* product, such as sodium dichloro-s-triazinetrione, for each 10,000 gallons of water (12 grams per 1,000 liters), while the filtration system is running. This will increase the available chlorine by approximately 8 ppm (mg/L).

Cover pool, prepare heater, filter and heater components for winter by following manufacturers' instructions.

## AQUATIC NON-FOOD RESIDENTIAL:

### **SPAS AND HOT-TUBS**

This product is intended for use in controlling bacteria in spas and tubs. This product is also highly effective in controlling and destroying algae in outdoor spas and hot tubs. This slow dissolving product is to be used in a suitable granular chlorinating device. DO NOT add directly to the spa water.

Re-entry into treated spa or hot tub is prohibited above levels of 3 ppm (mg/L) of available chlorine.

### **SPA AND HOT TUB DISINFECTION**

**Start up** - Before using this product, make sure that the filtration system is clean and operating properly. Adjust the pH of the water to the range of 7.2-7.6 and the alkalinity of the water to a minimum of 125 ppm (mg/L), using suitable products and reliable test kits. For bather safety, it is not recommended that water temperatures exceed 104°F (40°C).

Add a sufficient amount of an appropriate *shock* product directly to the surface of circulating water to raise the chlorine level in the water to 5-6 ppm (mg/L), based on suitable test kit readings. For example, the addition of one ounce of sodium dichloro-s-triazinetrione per 1,000 gallons (0.75 grams per 100 liters) of water will increase the available chlorine by 5 ppm (mg/L).

**Shock treatment** - After each use, the water should be shocked or super-chlorinated. Add a sufficient amount of an appropriate *shock* product directly to the surface of circulating water to raise the available chlorine level 5-6 ppm (mg/L), based on test kit readings. For example, the addition of one ounce of sodium dichloro-s-triazinetrione per 1,000 gallons (0.75 grams per 100 liters) of water will increase the available chlorine by 5 ppm (mg/L). If the combined chlorine reading is not below 0.5 ppm (mg/L) and the water has not been restored to its normal clarity, repeat the shock treatment described above. *Combined* chlorine is the difference between *total* and *free* chlorine, as measured by a suitable test kit

**Maintenance treatment** - Add this product to the granular feeder (or chlorinating device). Adjust the feeder to maintain the free available chlorine level in the water at 3-5 ppm (mg/L) as indicated by a reliable test kit. Periodically refill feeding device with enough product to assure a constant treatment level of 1-3 ppm (mg/L) available chlorine. Weather and usage effect sanitizer levels. In addition, some oils, lotions, fragrances, cleaners, etc. may cause foaming or cloudy water as well as reduce the efficiency of this product. Maintain the pH at 7.2-7.6 and the alkalinity at a minimum of 125 ppm (mg/L).

When the total dissolved solid (TDS) reaches 3000 ppm (mg/L) or whenever the water becomes difficult to manage, the water should be drained and the spa/hot tub thoroughly cleaned before adding fresh water.

## AQUATIC NON-FOOD RESIDENTIAL:

### **SWIMMING POOLS, SPAS AND HOT TUB SHOCK TREATMENT**

As a preventative measure, shock treat (super-chlorinate) once per week or after heavy rains, windstorms, or high bather loads, to minimize pool problems. -In addition, Shock Treatment may be required to remedy cloudy, dull or hazy water, unpleasant odors, eye irritation or when pool turns green or slimy (algae problems ).

To achieve a shock of 10 ppm (mg/L) available chlorine use 1 pound of this product per 11,000 gallons of pool water.

Re-entry into the treated swimming pool, spa or hot tub is prohibited above levels of 3 ppm (mg/L) available chlorine.

#### **To Determine Pool Volume:**

Rectangular pools - Length (ft.) times width (ft.) times average depth (ft.) times 7.5 equals volume.

Round and Oval pools- Maximum diameter (ft.) times minimum diameter (ft.) times average depth (ft.) times 5.9 equals gallons.

**Start up** - Before using this product, make sure that the filtration system is clean and operating properly. Adjust the pH of the water to the range of 7.2 - 7.6 using suitable products and a reliable test kit. Adjust the alkalinity of the water to a minimum of 125 ppm (mg/L), based on the test kit reading.

#### **Shock treatment:**

1. Remove as much debris as possible from the pool using hand skimmer, pool leaf rake or by vacuuming to waste.
2. Empty skimmer of any chemicals or debris.
3. Make sure filter is on and water is properly circulating through skimmer.
4. Remove any chemicals from in line automatic dispensing devices that are not chlorinated isocyanurates (trichlor or dichlor).
5. Slowly pour product into skimmer making sure that it is drawn into the filter system.
6. **Operate the pump/filter continuously for at least two hours** (without back-washing) to insure the product is dissolved out of the filter and is well mixed into the pool.  
**Caution:** a large stagnant accumulation of wet product can generate decomposition products that can cause an explosion . Do not shut off pump/filter circulation for two hours after adding this product or perform other operations with the pool filter system during this time.
7. If necessary repeat treatment.

**AQUATIC NON-FOOD RESIDENTIAL:**

**ORNAMENTAL PONDS / AQUARIA**

This product is intended for use in controlling bacteria and algae in residential ornamental ponds and similar aquaria. This product may be added to the system by direct placement into the water at a point where the product will be uniformly mixed with water (avoid if bleaching may be a problem). The frequency of feeding and duration of the treatment will depend on the severity of the contamination. Badly fouled systems must be cleaned before treatment begins.

It should be noted that very low levels of chlorine can be highly toxic to certain fish and other aquatic species.

**Start up** - Before using this product, make sure that the system is clean and the circulation system is operating properly.

Shock (super-chlorinate) the pond with an appropriate product, followed by maintenance treatment.

**Shock treatment** - The water should be super-chlorinated or shocked whenever the *combined* chlorine level is above 0.5 ppm (mg/L). *Combined* chlorine is the difference between *total* and *free* chlorine, as measured by a suitable test kit.

Add a sufficient amount of an appropriate *shock* product directly to the surface of circulating water to raise the free chlorine level to 5-6 ppm (mg/L), based on test kit readings. For example, the addition of one ounce of sodium dichloro-s-triazinetrione will provide about 5 ppm (mg/L) of available chlorine to 1,000 gallons of water (0.75 grams per 100 liters). If the combined chlorine reading is not below 0.5 ppm (mg/L) and the water has not been restored to its normal clarity, repeat the shock treatment described above.

**Maintenance treatment** - Add this product daily or as needed to maintain the free available chlorine level in the water at 1-3 ppm (mg/L) as indicated by a reliable test kit. The addition of 1.5 ounces of this product per 10,000 gallons of water (1 gram per 1,000 liters) will provide approximately 1 ppm (mg/L) of available chlorine. Weather and usage effect sanitizer levels. Maintain the pH at 7.2-7.6 and the alkalinity at a minimum of 125 ppm (mg/L).

**INDOOR FOOD:**

This product may be used on food contact surfaces in accordance with 21CFR 178.1010 of the Federal Food, Drug and Cosmetic Act.

**SOLUTION PREPARATION** - Prepare a 100 ppm (mg/L) sanitizing solution by thoroughly mixing 0.15 oz. of this product with 10 gallons of water (0.11 gram per liter). Solutions containing an initial concentration of 100 ppm (mg/L) available chlorine must be tested with a suitable chlorine test kit and adjusted periodically to insure that the available chlorine does not drop below 50 ppm (mg/L). Should the available chlorine level drop below 50 ppm (mg/L), either discard the solution or add 0.075 ounce of this product per 10 gallons of water (55 milligrams per liter) to increase the available chlorine level 50 ppm (mg/L) and maintain the 100 ppm (mg/L) solution strength.

**SANITIZATION OF NON-POROUS FOOD CONTACT SURFACES**

This product is recommended for use in poultry (egg/meat), egg handling equipment (commercial), dairy farm milk handling facilities/equipment, dairy farm milking equipment, agricultural/farm structures/buildings and equipment, agricultural/farm premises, household/domestic dwellings indoor food handling areas, food processing plant premises and equipment (food and non-food contact), meat processing plant premises and equipment (food and non-food contact), poultry processing plant premises and equipment (food and non-food contact), fish/seafood processing plant premises and equipment (food and non-food contact), eating establishments equipment/utensils and food handling areas (food contact).

**RINSE OR SPRAY METHOD** - Clean equipment surfaces in the normal manner and rinse with potable water. It is necessary and required to remove gross filth and heavy soil from surfaces by a pre-scrape, pre-flush, and where necessary, a pre-soak treatment. Prior to use, rinse all surfaces thoroughly with the sanitizing solution, maintaining contact with the sanitizer for 2 to 5 minutes. Do not rinse equipment with water after treatment.

The same solution may not be re-used for sanitizing activity; but, may be re-used for other purposes such as a cleaner in the feed tanks of spray type machines.

**IMMERSION METHOD** - Clean equipment in the normal manner. Prior to use, immerse equipment in the sanitizing solution for 2 to 5 minutes and allow the sanitizer to drain. Do not rinse equipment with water after treatment.

**INDOOR FOOD:**

**EGG WASHING**

This product is recommended for use in egg washing treatments (commercial).

Only clean, whole eggs can be used for sanitizing. Dirty, cracked or punctured eggs cannot be sanitized.

To sanitize clean egg shells intended for food or food products, spray with a solution of 0.15 ounce of this product in 10 gallons of water, providing 100 ppm (mg/L) available chlorine. The solution must be equal to or warmer than the eggs, but not exceeding 130°F. Wet eggs thoroughly allow to drain. Eggs that have been sanitized with this chlorine compound may be broken for use in the manufacture of egg products without prior potable water rinse. Eggs must be reasonably dry before casing or breaking. The solution must not be re-used for sanitizing eggs.

This product complies with the provisions of 21 CFR, Section 178.1010 of the Federal Food, Drug and Cosmetic Act. If this product is intended or recommended for use in plants operating under the U.S. Department of Agriculture egg grading and egg products inspection programs, authorization must be obtained for this specific product.

OK

**INDOOR FOOD:****PASTEURIZER/WARMER/CANNERY COOLING WATER SYSTEMS**

This product is intended for the control of bacteria, fungi and algae in pasteurizer/warmer/cannery cooling water systems.

This product may be added to the system continuously or intermittently as needed with a granular product feeding device or by direct placement into the water at a point where the product will be uniformly mixed with water. The frequency of feeding and duration of the treatment will depend on the severity of the contamination. Badly fouled systems must be cleaned before treatment begins.

**Intermittent or slug method**

**Initial Dose:** When the system is noticeably fouled, add this product at the rate of 0.1 to 0.5 pounds per 1000 gallons (12 to 60 grams per 1000 liters) in the system to achieve 0.5-10 ppm (mg/L) available chlorine, as measured by a suitable test kit. Repeat dosage until residual is achieved.

**Subsequent Dose:** When microbial control is evident, add this product at the rate of 0.02 to 0.1 pounds per 1000 gallons (2.4 to 12 grams per 1000 liters) in the system to achieve 0.5-1 ppm (mg/L) available chlorine, as measured by a suitable test kit. Repeat periodically as needed to maintain control.

**Continuous feed method**

**Initial Dose:** When the system is noticeably fouled, add this product at the rate of 0.1 to 0.5 pounds per 1000 gallons (12 to 60 grams per 1000 liters) in the system to achieve 0.5-10 ppm (mg/L) available chlorine, as measured by a suitable test kit. Repeat dosage until residual is achieved.

**Subsequent Dose:** When microbial control is evident, add this product at the rate of 0.02 to 0.1 pounds per day per 1000 gallons (2.4 to 12 grams per day per 1000 liters) in the system to maintain 0.5-1 ppm (mg/L) available chlorine, as measured by a suitable test kit.

This product may be used on food contact surfaces in accordance with 21CFR 178.1010 of the Federal Food, Drug and Cosmetic Act.

**INDOOR FOOD:****WATER WELL SYSTEMS**

This product is recommended for use in water well formation treatment where strong sanitizer solutions are needed. The product may be used before, during or after treatment with polyphosphates or other compatible materials used to remove lime scale deposits in well formations. This product is intended for use by trained well treating professionals as described below.

**Shock Load Sanitizer Solution:** Dissolve six (6) pounds of this product in 1000 gallons of water to obtain a solution containing 600 ppm (mg/L) of available chlorine. Pump this solution down the well to clear the screen and water bearing sand of any iron and sulfur forming bacteria that may be present. Follow Shock Load Sanitizer Solution with Displacement Water Sanitizer Solution prepared as described below.

**Displacement Water Sanitizer Solution:** Dissolve one pound of this product in 1000 gallons of water and pump it down the well on top of the Shock Load Sanitizer Solution. Several batches of the Displacement Water Sanitizer Solution may be required for the desired penetration of the formation.

These solutions should be allowed to contact the formation for a period of time from 30 minutes to four hours. At the end of this time, the sanitizer solution should be pumped from the well, the rate of improvement in pumping rate noted, and the solution monitored for chlorine level in accordance with the NPDES permit.

Repeat until the maximum pumping rate is achieved.

The product water must be of raw potable water quality after this sanitizing treatment. Therefore, before connecting the treated well to any potable water system, it must contain acceptable levels of phosphate. After the well has stabilized following the treatment, take two or three additional samples at hourly intervals to determine that the stabilized background level of PO<sub>4</sub> has been established.

**INDOOR NON-FOOD:****SANITIZATION OF HARD NON-POROUS NON-FOOD CONTACT SURFACES**

This product is recommended for use in egg plants/hatcheries/brooder rooms and shoe baths (hatching).

**SOLUTION PREPARATION** - Prepare a 100 ppm (mg/L) sanitizing solution by thoroughly mixing 0.15 oz. of this product with 10 gallons of water (0.11 gram per liter). Solutions containing an initial concentration of 100 ppm (mg/L) available chlorine must be tested with a suitable chlorine test kit and adjusted periodically to insure that the available chlorine does not drop below 50 ppm (mg/L). Should the available chlorine level drop below 50 ppm (mg/L), either discard the solution or add 0.075 ounce of this product per 10 gallons of water (55 milligrams per liter) to increase the available chlorine level 50 ppm (mg/L) and maintain the 100 ppm (mg/L) solution strength.

**RINSE OR SPRAY METHOD** - Clean equipment surfaces in the normal manner and rinse with potable water. It may be necessary to remove gross filth and heavy soil from surfaces by a pre-scrape, pre-flush, and where necessary, a pre-soak treatment. Prior to use, rinse all surfaces thoroughly with the sanitizing solution, maintaining contact with the sanitizer for 2 to 5 minutes. Do not rinse equipment with water after treatment.

The same solution may be used in the feed tanks of spray type machines providing at least one minute contact time to sanitize equipment.

**IMMERSION METHOD** - 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 and do not soak equipment overnight.

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**INDOOR RESIDENTIAL:**

**HARD NON-POROUS SURFACE SANITIZATION**

This product is recommended for use as a hard surface sanitizer in laundries (household and coin operated) and bathroom premises.

**SOLUTION PREPARATION** - Prepare a 100 ppm (mg/L) sanitizing solution by thoroughly mixing 0.15 oz. of this product with 10 gallons of water (0.11 gram per liter). Solutions containing an initial concentration of 100 ppm (mg/L) available chlorine must be tested with a suitable chlorine test kit and adjusted periodically to insure that the available chlorine does not drop below 50 ppm (mg/L). Should the available chlorine level drop below 50 ppm (mg/L), either discard the solution or add 0.075 ounce of this product per 10 gallons of water (55 milligrams per liter) to increase the available chlorine level 50 ppm (mg/L) and maintain the 100 ppm (mg/L) solution strength.

**RINSE OR SPRAY METHOD** - Clean equipment surfaces in the normal manner and rinse with potable water. It is necessary and required to remove gross filth and heavy soil from surfaces by a pre-scrape, pre-flush, and where necessary, a pre-soak treatment. Prior to use, rinse all surfaces thoroughly with the sanitizing solution, maintaining contact with the sanitizer for a 2 to 5 minutes. Do not rinse equipment with water after treatment.

The same solution may not be re-used for sanitizing activity; but, may be re-used for other purposes such as a cleaner in the feed tanks of spray type machines.

**IMMERSION METHOD** - 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 and do not soak equipment overnight.

This product may be used on food contact surfaces in accordance with 21CFR 178.1010 of the Federal Food, Drug and Cosmetic Act.

**INDOOR MEDICAL:**

This product is recommended for use as a sanitizer on hospital/medical premises (human/veterinary), hospital non-critical items (bedpans/furniture), hospital/medical institutions non-conductive floors.

**SOLUTION PREPARATION** - Prepare a 100 ppm (mg/L) sanitizing solution by thoroughly mixing 0.15 oz. of this product with 10 gallons of water (0.11 gram per liter). Solutions containing an initial concentration of 100 ppm (mg/L) available chlorine must be tested with a suitable chlorine test kit and adjusted periodically to insure that the available chlorine does not drop below 50 ppm (mg/L). Should the available chlorine level drop below 50 ppm (mg/L), either discard the solution or add 0.075 ounce of this product per 10 gallons of water (55 milligrams per liter) to increase the available chlorine level 50 ppm (mg/L) and maintain the 100 ppm (mg/L) solution strength.

**RINSE OR SPRAY METHOD** - Clean equipment surfaces in the normal manner and rinse with potable water. It is necessary and required to remove gross filth and heavy soil from surfaces by a pre-scrape, pre-flush, and where necessary, a pre-soak treatment. Prior to use, rinse all surfaces thoroughly with the sanitizing solution, maintaining contact with the sanitizer for a 2 to 5 minutes. Do not rinse equipment with water after treatment.

The same solution may not be re-used for sanitizing activity; but, may be re-used for other purposes such as a cleaner in the feed tanks of spray type machines.

This product is not to be used as a terminal sterilant/high level disinfectant on any surface or instrument that (1) is introduced directly into the human body, either into or in contact with the bloodstream or normally sterile areas of the body, or (2) contacts intact mucous membranes but which does not ordinarily penetrate the blood barrier or otherwise enter normally sterile areas of the body. This product may be used to pre-clean or decontaminate critical or semi-critical medical devices prior to sterilization or high level disinfection.

## DISINFECTION OF DRINKING WATER (EMERGENCY/PUBLIC/INDIVIDUAL SYSTEMS)

**PUBLIC SYSTEMS:** Feed 1 ounce of this product per 9000 gallons of water until a free available chlorine residual of at least 0.2 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 dissolving 1 ounce of this product into 60 gallons of water. After covering the well, pour the disinfecting solution into the well through both the pipe sleeve opening and the pipeline. Wash the exterior of the pump cylinder also with the disinfecting 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 disinfecting solution into the well. This solution can be made by dissolving 1 ounce of this product into 60 gallons of water. Add 5 to 10 gallons of clean, chlorinated water to the well in order to force the disinfectant into the rock formation. Wash the exterior of pump cylinder with the disinfectant. 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 disinfectant 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:

This product is recommended for disinfecting raw or pre-treated (settled, coagulated and/or filtered) water supplies intended for use as drinking water for humans and domestic animals.

The source of the water to be treated may be a river, lake, well, cistern or similar system. To obtain the desired disinfection results, the water to be treated should be clear and free of dirt and organic debris. If the source of the water is cloudy and contains dirt and organic debris, the water should be held in holding tanks or ponds, treated with coagulating agents and filtered to remove the dirt and organic debris.

Dissolve 0.1 ounce of this product in 60 gallons of water (120 milligrams per 10 liters) to obtain a concentration of 10 ppm (mg/L) of available chlorine. Let the water stand for one hour before using. A residual of 1 ppm (mg/L) of available chlorine, as measured by a reliable test kit, should be maintained in the water to insure disinfection.

**PUBLIC WATER SYSTEMS:**

**RESERVOIRS: ALGAE CONTROL** – Continuous chlorination is the most effective method for destroying algae; however, slug treatment can also be effective. Suitable chlorine feeding points should be selected on each stream at least 50 yards upstream from the points of entry into the reservoir. Add this product at the following rates:

**Initial Dose:** When the system is noticeably fouled, add this product at the rate of 1 to 5 ounces per 10,000 gallons to achieve 0.5-1.5 ppm (mg/L) available chlorine, as measured by a suitable test kit. Repeat dosage until residual is achieved.

**Subsequent Dose:** When control is evident, add this product at the rate of 0.3 to 1.5 ounces per 10,000 gallons to maintain 0.2-0.5 ppm (mg/L) available chlorine, as measured by a suitable test kit.

**MAINS** - Thoroughly flush section to be disinfected 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 chlorinator. 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 6 ounces of this product for each 10 cubic feet of moving 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 service.

**NEW FILTER SAND** - Apply 12 ounces 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 disinfecting the new sand.

**NEW WELLS** - Flush the casing with a 50 ppm available chlorine solution of water containing 0.8 ounces 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. After 24 hours flush well until all traces of chlorine have been removed from the water. 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. Contact your local Health Department for further details.

**EXISTING EQUIPMENT** - Remove equipment from service, thoroughly clean surfaces of all physical soil. Disinfect by placing 6 ounces of this product for each 10 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 0.8 ounces of this product for each 5 gallons of water (approximately 1000 ppm available chlorine). After drying, flush with water and return to service.

**EMERGENCY DISINFECTION AFTER FLOODS:**

**WELLS** - Thoroughly flush contaminated casing with a 500 ppm available chlorine solution. Prepare this solution by mixing 0.8 ounce 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. After 24 hours flush well until all traces of chlorine have been removed from the water. 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. Retreat well if water samples are biologically unacceptable. Contact your local Health Department for further details.

**RESERVOIRS** - In case of contamination by overflowing streams, establish chlorinating 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 6 ounces of product per 10 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 0.8 ounce of this product for each 5 gallons of water (1000 ppm available chlorine). Allow to stand for 2 to 4 hours, flush and return to service.

**FILTERS** - When the sand filter needs replacement, apply 12 ounces 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 12 ounces 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 12 ounces of this product per each 50 sq. ft., allowing the water to stand at a depth of 1 foot above the filter sand. After 30 minutes, drain water to the level of the filter. After 4 to 6 hours drain, and proceed with normal back-washing.

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

**EMERGENCY DISINFECTION AFTER FIRES:**

**CROSS CONNECTIONS OR EMERGENCY CONNECTIONS** - Set up a chlorine feed system near the intake of the untreated water supply. Add 0.75 ounces of this product per 1,000 gallons of water until a chlorine residual of at least 0.2 ppm (as measured by a chlorine test kit) at the point where the untreated supply enters the regular distribution system.

**EMERGENCY DISINFECTION AFTER DROUGHT:**

**SUPPLEMENTARY WATER SUPPLIES** - A chlorine feed system should be set up on the supplementary water line. This product should be added at 0.45 ounces per 1,000 gallons until a minimum chlorine residual of 0.2 ppm (as measured by a chlorine test kit) is achieved. The water should be held for 20 minute before use.

**WATER SHIPPED IN BY TANKS, TANK CARS, 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 0.4 ounces of this product for each 5 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, as measured by a chlorine test kit.

**EMERGENCY DISINFECTION AFTER MAIN BREAKS:**

**MAINS** - Before assembly of the repaired section, flush out mud and soil. Permit a water flow of at least 2.5 feet per minute to continue under pressure while injecting this product by means of a chlorinator. 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.

## STORAGE AND DISPOSAL

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

**STORAGE:** Keep material dry and in a dry area. Store in original container where temperatures do not exceed 125°F (52°C) for 24 hours. Keep container tightly closed.

**PESTICIDE DISPOSAL:** Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance. The preferred disposal methods are incineration or chemical treatment in accordance with Federal, State and Local regulations.

Do not put product, spilled product, or filled or partially filled containers into the trash or waste compactor. Contact with incompatible materials could cause a reaction and fire. **DO NOT** transport wet or damp material.

### **CONTAINER DISPOSAL:**

**BULK BAG:** Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

**BULK BIN:** Return empty bulk bin for reuse. Do not remove or deface labels. Do not vacuum, wash or clean inside of bin.

**FIBER DRUM:** Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment. Then dispose of liner in a sanitary landfill or by incineration as allowed by state and local authorities. If drum is contaminated and cannot be reused, dispose of in the same manner.

**PLASTIC CONTAINER:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

**HOUSEHOLD CONTAINERS:** Do not reuse container. Rinse thoroughly before discarding in trash.