

7152-88

04/10/2013

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

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

April 10, 2013

Ms. Abigail T. Downs  
Regulatory Consultant to Seaboard Industries  
Technology Sciences Group (TSG) Inc.  
1150 18<sup>th</sup> Street, NW, Suite 1000  
Washington, D.C. 20036

SUBJECT: Seaboard Liquid Shock  
EPA Registration Number: 7152-88  
Application Date: March 7, 2013  
Application Receipt: March 11, 2013

Dear Ms. Downs:

This acknowledges receipt of the above notification application, submitted under the provision of PR Notice 98-10, FIFRA 3 (c) 9.

Proposed Notification:

TSG proposes to update the Precautionary Statement and the Storage and Disposal language on the product label.

General Comments:

The Notification application is **acceptable**. If you have any questions or comments with regard to this Agency letter, please contact Nathan Mottl via email at [mottl.nathan@epa.gov](mailto:mottl.nathan@epa.gov) or by telephone at 703-305-0208.

Sincerely,

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



United States  
Environmental Protection Agency  
Washington, DC 20460

- Registration
- Amendment
- Other

OPP Identifier Number

**Application for Pesticide – Section I**

1. Company/Product Number <b>7152-88</b>	2. EPA Product Manager <b>Monisha Harris</b>	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) <b>Seaboard Industries / Seaboard Liquid Shock</b>	PM# <b>32</b>	
5. Name And Address Of Applicant (Include ZIP Code) <b>SEABOARD INDUSTRIES D/B/A SEABOARD INDUSTRIES, INC. 185 VAN WINKLE AVE. HAWTHORNE, NJ 07506</b> <input type="checkbox"/> Check if this is a new address	6. Expedited Review. 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.
- Final Printed labels in response to Agency letter dated \_\_\_\_\_
- Resubmission in response to Agency letter dated \_\_\_\_\_
- "Me Too" Application.
- Notification – Explain below.
- Other – Explain Below.

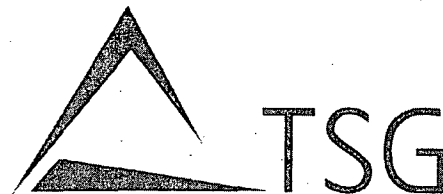
**Explanation:** Use additional page(s) if necessary. (For section I and Section II.)  
**Notification to update Storage and Disposal and Precautionary Statements per PR Notice 98-10. This notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR 152.46, and no other 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 40 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 <input type="checkbox"/> Yes* <input type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	2. Type of Container <input type="checkbox"/> Metal <input type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) _____
* Certification must be submitted		If "Yes"    No. per Unit Packaging wgt.    Container	If "Yes"    No. per Unit Packaging wgt.    Container
3. Location of Net Contents Information <input type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(S) Retail Container	
		5. Location of Label Directions <input type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product	
6. Manner in Which Label is Affixed to Product		<input type="checkbox"/> Other _____	
<input type="checkbox"/> Lithographed		<input type="checkbox"/> Payer glued	
<input type="checkbox"/> Stenciled			

**Section IV**

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)		
Name <b>Abigail T. Downs, Technology Sciences Group, Inc.</b>	Title <b>Regulatory Consultant</b>	Telephone No. (include Area Code) <b>(202) 628-8992</b>
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 knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		6. Date Application Received <b>(Stamped)</b>
2. Signature 		3. Title <b>Regulatory Agent to Seaboard Industries</b>
4. Typed Name <b>Abigail T. Downs</b>		5. Date <b>March 7, 2013</b>



**Technology Sciences Group Inc.**

1150 18<sup>th</sup> Street, NW, Suite 1000  
Washington, D.C. 20036  
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**Abigail T. Downs**  
Regulatory Consultant

Monisha Harris / PM 32  
Office of Pesticide Products, US EPA  
Room S-4900, One Potomac Yard  
2777 South Crystal Drive  
Arlington, VA 22202-4501

March 7, 2013

**RE: Notification to Revise Product Label per PR Notice 98-10**

**Company Name:** Seaboard Industries

**Product Name:** Seaboard Liquid Shock

**EPA Reg. No.:** 7152-88

Dear Ms. Harris

Technology Sciences Group Inc., on behalf of Seaboard Industries, is submitting the enclosed notification to revise the aforementioned product label. Per PR Notice 98-10, the purpose of this notification is to update the Precautionary Statement and the Storage and Disposal language on the product label to meet current Agency standards for labeling. This submission is submitted concurrently with similar notifications for the following Seaboard Industries products:

- 7152-5
- 7152-15
- 7152-21
- 7152-32
- 7152-33
- 7152-34
- 7152-39
- 7152-65
- 7152-87
- 7152-89

Please find the following documents submitted in support of this application:

- 8570-1, Application for Pesticide;
- One (1) redline version of the proposed label; and
- Three (3) clean copies of the proposed label.



**(Front Panel)**

*[Alternate Brand Names: Star Shock, Liquid Shock]*

**Seaboard Liquid Shock**

Active Ingredient:

\*Sodium Hypochlorite..... 12.5%

Other Ingredients:..... 87.5%

Total:..... 100.0%

\*Available chlorine 12.5%

**Keep Out Of Reach Of Children**

**DANGER**

**SEE FIRST AID AND OTHER PRECAUTIONARY STATEMENTS ON (BACK) (SIDE) PANEL BEFORE OPENING CONTAINER**

Net Contents:

EPA Reg. No. 7152-88

EPA Est. No. 7152-NJ-1

Manufactured for:

Seaboard Industries

185 Van Winkle Ave.

Hawthorne, NJ 07506

Tel.: (201) 427-8500

<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 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>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>
<p>Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For emergency assistance involving chemicals call CHEMTREC day or night at: 1-800-424-9300.</p> <p><b>NOTE TO PHYSICIAN:</b> Probable mucosal damage may contraindicate the use of gastric lavage.</p>	

<b>PRECAUTIONARY STATEMENTS</b>
<p><b>Hazards to Humans and Domestic Animals.</b></p> <p><b>DANGER:</b> Corrosive. Causes irreversible eye damage and skin burns. Do not get in eyes, on skin, or on clothing. Wear long-sleeved shirt, pants, gloves, and protective eyewear. Wash thoroughly with soap and water after handling and before eating, chewing gum, drinking, using tobacco, or using the toilet. Avoid breathing vapors and use only in a well-ventilated area. Vacate poorly ventilated areas as soon as possible. Do not return until strong odors have dissipated. Remove and wash contaminated clothing before reuse.</p>
<p><b>ENVIRONMENTAL HAZARDS</b></p> <p>This pesticide is toxic to fish and aquatic organisms. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or public water 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 into sewer systems without previously notifying the sewage treatment plant authority. For guidance, contact your State Water board or regional Office of the EPA.</p>
<p><b>PHYSICAL OR CHEMICAL HAZARDS</b></p> <p><b>STRONG OXIDIZING AGENT:</b> Mix only with water according to label directions. Mixing this product with chemicals (e.g. ammonia, acids, detergents, etc.) or organic matter (e.g. urine, feces etc.) will release chlorine gas which is irritation to eyes, lungs and mucous membranes.</p>

**DIRECTIONS FOR USE**

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

**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 available. Solutions containing an initial concentration of 100 ppm available chlorine must be tested and adjusted periodically to insured 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 10 gallons of water. If no test kit is available, prepare a sanitizing solution by thoroughly mixing 2 oz. of this product with 10 gallons of water to provide approximately 200 ppm available chlorine by weight.

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

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

**IMMERSION METHOD**

A solution of 100 ppm available chlorine may be used in the sanitizing solution if a chlorine test kit is available. Solutions containing an illegal 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 10 gallons of water. If no test kit is available, prepare a sanitizing solution by thoroughly mixing 2 oz. of this product with 10 gallons of water to provide approximately 200 ppm available chlorine by weight.

Clean equipment in the normal manner. Prior to use, immerse equipment in the sanitizing solution for at least 2 minutes and allow the sanitizer to drain. If the solutions 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 ration of 2 oz. product with 10 gallons of water. Pump solution through the system until full flow is obtained at all extremities, the system is completely filled with the sanitizer and all air is removed from the system. Close drain values 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 2 oz. product with 10 gallons of water. Pump solution through the system until full flow is obtained at all extremities, the system is completely filled with the sanitizer and all air is removed from the system. Close drain values and hold under pressure for at least 10 minutes to insure contact with all internal surfaces. Remove some cleaning solution from drain value and test with a chlorine test kit. Repeat entire cleaning/sanitizing process if effluent contains less than 50 ppm available chlorine.

**SPRAY/FOG METHOD**

Preclean all surface 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 or sufficient size by throughout mixing the product in a ratio of 2 oz. product with 10 gallons of water. Prepare a 600 ppm solution by thoroughly mixing the product in a ratio of 6 oz. product with 10 gallons of water. Use spray or fogging equipment which can resist hypochlorite solutions. Always empty and rinse spray/fog equipment with potable water after use. Thoroughly spray or fog all surfaces until wet, allowing excess sanitizer to drain. Vacate area for at least 2 hours. Prior to using equipment, rinse all surfaces treated with a 600 ppm solution with a 200 ppm solution.

**SANITIZATION OF POROUS FOOD CONTACT SURFACES**

**RINSE METHOD**

Prepare a 600 ppm solution by thoroughly mixing, in an immersion-tank, 6 oz. of this product with 10 gallons of water. Clean surfaces in the normal manner. Rinse all surfaces thoroughly with the 600 ppm solution, maintaining contact for at least 2 minutes. Prepare a 200 ppm sanitizing solution by thoroughly mixing 2 oz. of this product with 10 gallons of water. Prior to using equipment, rinse all surfaces with a 200 ppm available chlorine solution. Do not rinse and do not soak equipment over night.

**IMMERSION METHOD**

Prepare a 600 ppm solution by thoroughly mixing, in an immersion tank, 6 oz. of this product with 10 gallons of water. Clean equipment in the normal manner. Immerse equipment in the 600 ppm solution for at least 2 minutes. Prepare a 200 ppm sanitizing solution by thoroughly mixing 2 oz. of this product with 10 gallons of water. Prior to using equipment, immerse all surfaces with a 200 ppm available chlorine solution. Do not rinse and do not soak equipment over night.

**SPRAY/FOG METHOD**

Preclean all surfaces after use. Prepare a 600 ppm available chlorine sanitizing solution of sufficient size by thoroughly mixing the product in a ratio of 6 oz. product with 10 gallons of water. Use spray or fogging equipment which can resist hypochlorite solutions. Always empty and rinse spray/fogging equipment with potable water after use. Thoroughly spray or fog all surfaces until wet, allowing excess sanitizer to drain. Vacate area for at least 2 hours. Prior to using the equipment, rinse all surfaces with a 200 ppm available chlorine solution. Prepare a 200 ppm sanitizing solution by thoroughly mixing 2 oz. of this product with 10 gallons of water.



## **SANITIZATION OF NONPOROUS NON-FOOD CONTACT SURFACES**

### **RINSE METHOD**

Prepare a sanitizing solution by thoroughly mixing 2 oz. of this product with 10 gallons of water to provide approximately 200 ppm available chlorine by weight. Clean equipment surfaces in the normal manner. Prior to use, rinse all surface 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, 2 oz. of this product with 10 gallons of water to provide approximately 200 ppm available chlorine by weight. Clean equipment in the normal manner. Prior to use, immerse equipment in the sanitizing solution for at least 2 minutes and allow the sanitizer to drain. Do not rinse equipment with water after treatment.

### **SPRAY/FOG METHOD**

Preclean all surfaces after use. Prepare a 200 ppm available chlorine sanitizing solution of sufficient size by thoroughly mixing the product in a ratio of 2 oz. of product with 10 gallons of water. Use spray or fogging equipment which can resist hypochlorite solutions. Prior to using equipment, thoroughly spray or fog all surfaces until wet, allowing excess sanitizer to drain. Vacate area for at least 2 hours.

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

### **RINSE METHOD**

Prepare a sanitizing solution by thoroughly mixing 6 oz. of this product with 10 gallons of water to provide approximately 600 ppm available chlorine by weight. Clean surfaces in the normal manner. Prior to use, rinse all surfaces thoroughly with the sanitizing solution, maintaining contact with the sanitizer for at least 2 minutes. Do not rinse equipment with water after treatment and do not soak equipment overnight.

### **IMMERSION METHOD**

Prepare a sanitizing solution by thoroughly mixing, in an immersion tank, 6 oz. of this product with 10 gallons of water to provide approximately 600 ppm available chlorine by weight. Clean equipment in the normal manner. Prior to use, immerse equipment in the sanitizing for at least 2 minutes and allow the sanitizer to drain. Do not rinse equipment with water after treatment.

### **SPRAY/FOG METHOD**

After cleaning, sanitize non-food contact surfaces with 600 ppm available chlorine by thoroughly mixing the product in a ratio of 6 oz. of this product with 10 gallons of water. Use spray or fogging equipment which can resist hypochlorite solutions. Always empty and rinse spray/fog equipment with potable water after use. Prior to using equipment, thoroughly spray or fog all surfaces until wet, allowing excess sanitizer to drain. Vacate for at least 2 hours.

## LAUNDRY SANITIZERS

### COMMERCIAL LAUNDRY SANITIZERS

Wet fabrics or clothes should be spun dry prior to sanitization. Thoroughly mix 2 oz. of this product with 10 gallons of water to yield 200 ppm available chlorine. Promptly, after mixing the sanitizer, add the solution into the prewash prior to washing fabrics/clothes in the regular wash cycle with a good detergent. Test the level of available chlorine if the solution has been allowed to stand. Add more of this product if the available chlorine level has dropped below 200 ppm.

## AGRICULTURAL USES

### 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 tons of potatoes. Thoroughly mix 1 oz. of this product to 2 gallons of water to obtain 500 ppm available chlorine.

### FOOD EGG SANITIZATION

Thoroughly clean all eggs. Thoroughly mix 2 oz. this product with 10 gallons of warm water to produce a 200 ppm available chlorine solution. The sanitizer temperature should not exceed 130° F. Spray the warm sanitizer so that the eggs are thoroughly wetted. Allow the eggs to thoroughly dry before casing or breaking. Do not apply a potable water rinse. The solution should not be reused to sanitize eggs.

### FRUIT & VEGETABLE WASHING

Thoroughly clean all fruits and vegetables in a wash tank. Thoroughly mix 5 oz. of this product in 200 gallons of water to making 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.

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

#### PUBLIC SYSTEMS

Mix a ratio of 1 oz. of this product to 100 gallons of water. Begin feeding this solution with a hypochlorinator until a free available chlorine residual of at least 0.2 ppm and 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 10 gallons of water. After covering the well, pour the sanitizing solution into the well through both the pipesleeve opening and the

pipeline. Wash the exterior of the pump cylinder also with the sanitizing solution. Start pump and pump water until strong odor of chlorine in water is noted. Stop pump and wait at least 24 hours. After 24 hours flush well until all traces of chlorine have been removed from the water. Consult your local Health Department for further details.

**INDIVIDUAL 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 10 gallons of water. Add 5 to 10 gallons of clean, chlorinated water to the well in order to force the sanitizer into the rock formation. Wash the exterior of pump cylinder with the sanitizer. Drop pipeline into well, start pump and pump water until strong odor of chlorine in water is noted. Stop pump and wait at least 24 hours. After 24 hours flush well until all traces of chlorine have been removed from the water. Deep wells with high water levels may necessitate the use of special methods for introduction of the sanitizer into the well. Consult your local Health Department for further details.

**INDIVIDUAL WATER SYSTEMS: FLOWING ARTESIAN WELLS**

Artesian wells generally do not require disinfection. If analyses indicate persistent contamination, the well should be disinfected. Consult your local Health Department for further details.

**EMERGENCY DISINFECTION**

When boiling of water for 1 minute is not practical, water can be made potable by using this product. Prior to addition of the sanitizer, remove all suspended material by filtration or by allowing it to settle to the bottom. Decant the clarified, contaminated water to a clean container and add 1 drop of this product to 20 gallons of water. 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 several times.

**PUBLIC WATER SYSTEMS**

**RESERVOIRS-ALGAE CONTROL**

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

**MAINS**

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

**NEW TANKS, BASINS, ETC.**

Remove all physical soil from surface. Place 20 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 service.

**NEW FILTER SAND**

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

**NEW WELLS**

Flush the casing with a 50 ppm available chlorine solution of water containing 5 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.

**EMERGENCY DISINFECTION AFTER FLOODS**

**DISTRIBUTION SYSTEM**

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

**EMERGENCY DISINFECTION AFTER FIRES**

**CROSS CONNECTIONS OR EMERGENCY CONNECTIONS**

Hypochlorination or gravity feed equipment should be set up near the intake of the untreated water supply. Apply sufficient product to give a chlorine residual of at least 0.1 to 0.2 ppm at the point where the untreated supply enters the regular distribution system. Use a chlorine test kit.

**EMERGENCY DISINFECTION AFTER MAIN BREAKS**

**MAINS**

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

**SWIMMING POOL WATER DISINFECTION**

For a new pool or spring start-up, superchlorinate with 52 to 104 oz. of product for each 10,000 gallons of water to yield 5 to 10 ppm available chlorine by weight. Check the level of available chlorine with a test kit. Adjust and maintain pool water pH to between 7.2 to 7.6. Adjust and maintain the alkalinity of the pool to between 50 to 100 ppm.

To maintain the pool, add manually or by a feeder device 11 oz. of this product for each 10,000 gallons of water to yield an available chlorine residual between 0.6 to 1.0 ppm by weight. Stabilized pools should maintain a residual of 1.0 to 1.5 ppm available chlorine. Test the pH, available chlorine residual and alkalinity of the water frequently with appropriate test kits. Frequency of water treatment will depend upon temperature and number of swimmers.

Every 7 days, or as necessary, superchlorinate the pool with 52 to 104 oz. of product for each 10,000 gallons of water to yield 5 to 10 ppm available chlorine by weight. Check the level of available chlorine with a test kit. Do not reenter pool until the chlorine residual is between 1.0 to 3.0 ppm.

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

**WINTERIZING POOLS**

While water is still clear and clean, apply 3 oz. of product per 1000 gallons, while filter is running, to obtain a 3 ppm available chlorine residual, as determined by a suitable test kit. Cover pool, prepare heater, filter and heater components for winter by following manufacturer's instructions.

**SPAS, HOT-TUBS, IMMERSION TANKS, ETC.**

**SPAS/HOT TUBS**

Apply 5 oz. of product per 1000 gallons of water to obtain a free available chlorine concentration of 5 ppm, as determined by a suitable chlorine test kit. Adjust and maintain pool water pH to between 7.2 and 7.8. Some oils, lotions, fragrances, cleaners, etc. may cause foaming or cloudy water as well as reduce the efficiency of the product.

To maintain the water, apply 5 oz. of product per 1000 gallons of water over the surface to maintain a chlorine concentration of 5 ppm.

After each use, shock treat with 8 oz. of this product per 500 gallons of water to control odor and algae.

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

**HUBBARD AND IMMERSION TANKS**

Add 5 oz. of product per 200 gallons of water before patient use to obtain a chlorine residual of 25 ppm, as determined by a suitable test kit. Adjust and maintain the water pH to between 7.2 and 7.6. After each use drain the tank. Add 5 oz. to a bucket of water

and circulate this solution through the agitator of the tank for 15 minutes and then rinse out the solution. Clean tank thoroughly and dry with clean cloths.

**HYDROTHERAPY TANKS**

Add 1 oz. of this product per 1000 gallons of water to obtain a chlorine residual of .1 ppm, as determined by a suitable chlorine test kit. Pool should not be entered until the chlorine residual is below 3 ppm. Adjust and maintain the water pH to between 7.2 and 7.6. Operate pool filter continuously. Drain pool weekly, and clean before refilling.

**DISINFECTION OF NONPOROUS NON-FOOD CONTACT SURFACES**

**RINSE METHOD**

Prepare a disinfecting solution by thoroughly mixing 6 oz. of this product with 10 gallons of water to provide approximately 600 ppm available chlorine by weight. Clean equipment surfaces in the normal manner. Prior to use, rinse all surfaces thoroughly with 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, 6 oz. of this product with 10 gallons of water to provide approximately 600 ppm available chlorine by weight. Clean equipment in the normal manner. Prior to use, immerse equipment in the disinfecting solution for at least 10 minutes and allow the sanitizer to drain. Do not rinse equipment with water after treatment.

**SEWAGE AND 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, if the chlorinated effluent has been reduced to or below the maximum permitted by the controlling regulatory jurisdiction.

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

The following are critical factors affecting wastewater disinfection:

1. **Mixing:** It is imperative that the product and the wastewater be instantaneously and completely flash mixed to assure reaction with every chemically active soluble and particulate component of the wastewater.
2. **Contacting:** Upon flash mixing, the flow through the system must be maintained.

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

**SEWAGE AND WASTEWATER TREATMENT**

**EFFLUENT SLIME CONTROL**

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

**FILTER BEDS-SLIME CONTROL**

Remove filter from service, drain to a depth of 1 ft. above filter sand, and add 80 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.

**PULP AND PAPER MILL PROCESS WATER SYSTEMS**

**SLUG FEED METHOD**

Initial Dose: When system is noticeably fouled, apply 52 to 104 oz. of this product per 10,000 gallons of water in the system to obtain from 5 to 10 ppm available chlorine. Repeat until control is achieved.

Subsequent Dose: When microbial control is evident, add 11 oz. of this product per 10,000 gallons of water in the system daily, or as needed to maintain control and keep the chlorine residual at 1 ppm. Badly fouled systems must be cleaned before treatment is begun.

**INTERMITTENT FEED METHOD**

Initial Dose: When system is noticeably fouled, apply 52 to 104 oz. of this product per 10,000 gallons of water in the system to obtain 5 to 10 ppm available chlorine. Apply half (or 1/3, 1/4, or 1/5) of this initial dose when half (or 1/3, 1/4 or 1/5) of the water in the system has been lost by blowdown.

Subsequent Dose: When microbial control is evident, add 11 oz. of this product per 10,000 gallons of water in the system to obtain a 1 ppm residual. Apply half (or 1/3, 1/4, or 1/5) of this initial dose when half (or 1/3, 1/4, or 1/5) of the water in the system has been lost by blowdown. Badly fouled systems must be cleaned before treatment is begun.

**CONTINUOUS FEED METHOD**

Initial Dose: When system is noticeably fouled, apply 52 to 104 oz. of this product per 10,000 gallons of water in the system to obtain 5 to 10 ppm available chlorine.

Subsequent Dose: Maintain this treatment level by starting a continuous feed of 1 oz. of this product per 1,000 gallons of water lost by blowdown to maintain a 1 ppm residual. Badly fouled systems must be cleaned before treatment is begun.

**SLUG FEED METHOD**

Initial Dose: When system is noticeably fouled, apply 52 to 104 oz. of this product per 10,000 gallons of water in the system to obtain from 5 to 10 ppm available chlorine. Repeat until control is achieved.

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**STORAGE AND DISPOSAL**

Do not contaminate food or feed by storage, disposal or cleaning of equipment.  
**Pesticide Storage:** Store this product in a cool dry area, away from direct sunlight and heat to avoid deterioration.  
**Pesticide Disposal:** In case of spill, flood areas with large quantities of water. Product or rinsates that cannot be used should be diluted with water before disposal in a sanitary sewer.  
**Container Disposal:** Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Then offer for recycling if available or puncture and dispose of in a sanitary landfill or by other procedures approved by state and local authorities.