

1757-96

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United States  
Environmental Protection  
Agency

Office of Pesticide Programs

April 23, 2008

Eliot Harrison, Agent for Drew Industrial Division  
c/o Lewis and Harrison  
122 C Street N.W., Suite 740  
Washington, D.C. 20001

Subject: Drewchlor 3004  
EPA Reg. No.: 1757-96  
Application Dated: March 14, 2008  
Receipt Dated: March 25, 2008

Dear Mr. Harrison:

The labeling for the product referred to above submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended (FIFRA) is accepted subject to the comments/conditions listed below.

**Conditions**

1. The section entitled "Meat Treatment" on page 8 must be deleted. The Agency does not permit FDA uses on EPA labeling.
2. The section entitled "Seafood" on page 8 must be deleted. The Agency does not permit FDA uses on EPA labeling.
3. Under the list of ingredients add the phrase "Available Chlorine 39%".

**General Comments**

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

CONCURRENCES							
SYMBOL	7510P	7510P					
SURNAME	M. Hardy	E. Fritzsche					
DATE	4-23-08	4-24-08					

Should you have any questions or comments concerning this letter, please contact Michael Hardy at (703) 308-6432.

Sincerely,

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



## FIRST AID

### IF IN EYES:

- Hold eye open and rise 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

### 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 INHALED

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

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

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

**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**DANGER.** Corrosive. Causes irreversible eye damage and skin burns. May be harmful if inhaled. May be fatal if swallowed. Irritating to nose and throat. Avoid breathing vapor. Do not get in eyes, on skin or clothing. Do not handle with bare hands. Wear protective eyewear (goggles or face shield), clothing and rubber gloves. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse to avoid fire.

**ENVIRONMENTAL HAZARDS**

This product is toxic to fish and aquatic organisms. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or 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 AND CHEMICAL HAZARDS**

Dry DREWCHLOR 3004 is a strong oxidizing agent. Only mix into or dilute with water or non-oxidizable materials. Contamination may start a chemical reaction with the generation of heat, liberation of a hazardous gas (chlorine dioxide) and with a possible fire and explosion. Do not contaminate with garbage, dirt, organic matter, household products, chemicals, soap products, paint products, solvents, acids, vinegar, beverages, oils, pine oil, dirty rags or any other foreign matter. Contact with acids may release toxic gas. Use only clean, dry utensils when handling.

**EMERGENCY HANDLING**

In case of contamination or decomposition, do not reseal container. If possible, isolate container in an open and well-ventilated area. Flood with large volumes of water. If fire occurs, extinguish fire by applying large volumes of water. Any unopened drums near the fire must be cooled by spraying with water.

### CHLORINE DIOXIDE GENERATION

DREWCHLOR 3004 is a precursor for the biocidal agent, chlorine dioxide. DO NOT ADD DREWCHLOR 30004 directly to the system being treated. Aqueous solutions of chlorine dioxide can be generated from DREWCHLOR 3004 by any of the following methods:

1. The chlorine method, which utilizes DREWCHLOR 3004 and chlorine gas.
2. The hypochlorite method which utilizes DREWCHLOR 3004, a hypochlorite solution and an acid.
3. The Acid-Chlorite method, which utilizes DREWCHLOR 3004 and an acid.
4. The electrolytic method, which utilizes DREWCHLOR 3004 and an electrolytic system.

The above generation methods produce a chlorine dioxide concentrate (300 – 4,000 ppm). For some applications, the chlorine dioxide concentrate must be diluted prior to use. Your Drew Industrial Division service representative can guide you in the selection, installation and operation of generation systems and the proper injection of chlorine dioxide. Alternatively, consult the instructions for the chlorine dioxide generation system before using this product. Add the generated chlorine dioxide solution to a point in the system which ensures uniform and adequate mixing and minimal volatilization.

**DIRECTIONS FOR USE**

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

**Food-Contact Surface Sanitizer**

Use chlorine dioxide generated from DREWCHLOR 3004 as a terminal no-rinse sanitizer for controlling pathogenic bacteria on food-contact surfaces, utensils and equipment in food-processing plants, (poultry, meat, seafood), food-handling establishments, breweries, dairies, ice-cream and bottling plants.

1. Prior to sanitization, all surfaces, utensils and equipment must be thoroughly cleaned to remove gross food particles and soil by a pre-flush or pre-scrape and, where necessary, a pre-soak treatment. Then thoroughly wash all surfaces, utensils and equipment with a suitable detergent or cleaner followed by a potable water rinse.
2. From DREWCHLOR 3004, generate a 15-25 ppm chlorine dioxide use-solution ("sanitizing solution").
3. Apply the sanitizing solution to the target surface by immersion, coarse spray, mop, wipe, flood or circulation techniques.
4. Allow a contact time of at least one minute. It is essential that the sanitizing solution contact all surfaces to be sanitized. Thus, hard to reach, in-place equipment, pipes and closed vessels must be filled with the solution.
5. Allow the sanitizing solution to thoroughly drain and air dry from all surfaces, utensils and equipment.

**Final Sanitizing Bottle/Cap Rinse**

Use chlorine dioxide generated from DREWCHLOR 3004 as a final sanitizing rinse for plastic, glass, or metal returnable and non-returnable bottles/caps/kegs/beverage containers.

1. Prior to sanitization, wash bottles with detergent or cleaning solution and rinse with potable water.
2. From DREWCHLOR 3004, generate a 15-25 ppm chlorine dioxide use-solution and rinse bottles/cans/containers with the use-solution. Allow to drain dry.

### **Sanitization of Conveyors for Food, Dairy and Beverage Processing Plants**

Use chlorine dioxide generated from DREWCHLOR 3004 in the static or continuous washing, rinsing and sanitizing of conveyor equipment, peelers, collators, slicers and saws.

1. During processing or interruptions in operations, generate a 15-25 ppm use solution of chlorine dioxide from DREWCHLOR 3004.
2. Apply the use-solution to the return portion of the conveyor or to the equipment using a coarse spray or other means of wetting the surfaces. Control the volume of the use-solution so as to permit maximum drainage and to prevent puddles. The conveyor may still be damp when food-contact occurs. Treat for at least one (1) minute.

### **Food-Processing Water Systems and Brewery Water**

Use chlorine dioxide generated from DREWCHLOR 3004 for microbial control in food-processing water systems and brewery water systems, such as flume transport, chill water systems, hydrocoolers, jetter water, pasteurizers, brewery influent or make-up water and bottle rinsing systems.

1. From DREWCHLOR 3004, generate a chlorine dioxide use-solution from 0.1- 5.0 ppm.
2. Apply the use-solution to the target water system at a level that will result in a residual concentration  $\leq 1.0$  ppm. The required dosage will vary with process conditions and the degree of contamination present.

### **Antimicrobial Rinse of Pre-Cleaned and/or New Returnable or Non-Returnable Containers**

Use chlorine dioxide generated from DREWCHLOR 3004 to reduce the number of beverage spoilage microorganisms in pre-cleaned and/or new returnable or non-returnable containers.

1. From DREWCHLOR 3004, generate a 15-25 ppm use-solution of chlorine dioxide.
2. Apply the use-solution at a temperature of 25°C to 40°C, with a contact time of 7 seconds.
3. Allow containers to drain thoroughly and then rinse with sterile or potable waters.



**General Environmental Surfaces Sanitization**

Use chlorine dioxide generated from DREWCHLOR 3004 to sanitize non-food contact surfaces, such as floors, walls, tables, chairs, benches, drains, troughs and drip pans in food-processing plants, breweries, food-handling establishments, ice-cream and bottling plants and breweries.

1. Prior to sanitization, pre-clean surfaces.
2. From DREWCHLOR 3004, generate a 15 –25 ppm chlorine dioxide use-solution.
3. Soak items in/with the 15 – 25 ppm use-solution using mop/wipe, or coarse spray or flood techniques and allow contact for at least one (1) minute.
4. Allow treated surfaces and items to drain adequately and air dry.
5. Fresh sanitizing solution must be made up daily or more often if solution becomes diluted or soiled.

\*For drains, this product is not expected to be effective past the trap or elbow in the drain.

**Sanitizer Rinse for Fruits and Vegetables**

Use chlorine dioxide generated from DREWCHLOR 3004 in food-processing facilities to reduce the growth of microorganisms that cause spoilage and decay of fruits and vegetables.

1. From DREWCHLOR 3004, generate a chlorine dioxide use-solution from 1.0 - 10.0 ppm.
2. Apply the use-solution to pre-process fruits and vegetables by spray or immersion methods at a level that will result in a chlorine dioxide residual  $\leq 3.0$  ppm. The required dosage will depend on the degree of contamination present.
3. Treatment of the fruits and vegetables must be followed by a potable water rinse or by blanching, cooking or canning.

**POULTRY PROCESSING WATER**

Use chlorine dioxide generated from DREWCHLOR 3004 as an antimicrobial agent in poultry processing water. The residual concentration of chlorine dioxide in the treated water cannot exceed 3 ppm. For treatment of poultry chill water, maintain a residual concentration of up to 3 ppm of chlorine dioxide in the chiller water, as determined by an appropriate method in accordance with 21CFR §173.300.

### **Meat Treatment**

Use Drewchlor 3004 to generate a chlorine dioxide use-solution for controlling spoilage microorganisms on red meat including meat parts and organs. Apply the use-solution as a spray to red meat, meat parts and organs or as a dip to red meat parts and organs at a level that will result in a chlorine dioxide residual of in the treatment solution of  $\leq 3.0$  ppm. Do not use on ready-to-eat meats.

### **Seafood**

Use Drewchlor 3004 to generate a chlorine dioxide use-solution for controlling spoilage microorganisms in water and ice that are used to rinse, wash, thaw, transport or store seafood. Apply the use-solution at a level that will result in a chlorine dioxide residual in the treatment solution of  $\leq 3.0$  ppm. Treatment of seafood products that will be consumed raw shall be subjected to a potable water rinse prior to consumption.

### **Potable Water Treatment**

Use DREWCHLOR 3004 to generate a chlorine dioxide use-solution for use as both a disinfectant and oxidant in potable water treatment. The required dosage will vary with source water conditions and the degree of contamination present. For most municipal and public potable water systems, a chlorine dioxide dosing concentration of up to 2 ppm is sufficient to provide adequate disinfection. Residual disinfectant and disinfectant byproducts must be monitored as required by the National Primary Drinking Water Regulations (40 CFR Part 141) and state drinking water standards.

### **Wastewater Treatment**

Use Drewchlor 3004 to generate a chlorine dioxide use-solution for use as a oxidant and disinfectant for odor control or as an oxidant and/or a disinfectant in wastewater treatment. The required dosages will vary with water conditions and the degree of contamination present. For most municipal and other wastewater systems, a chlorine dioxide residual concentration of up to 5 ppm is sufficient to provide adequate disinfection. In odor control and wastewater oxidant application, the applied dosage will depend on process water loading and conditions to achieve results and be in compliance with local and state permits.

### **Aqueous Disinfection Systems for CIP Cleaning**

Use Drewchlor 3004 in association with aqueous disinfection systems for CIP cleaning. If the concentration of chlorine dioxide generated from DREWCHLOR 3004 exceeds 5.0 ppm, a potable water rinse should follow treatment. Care should be taken to ensure the biological and chemical quality of potable water.

### **Bacterial Slime Control In Paper Mills**

Use DREWCHLOR 3004 to generate a chlorine dioxide use-solution for use as a slimicide in process water during the manufacture of paper and paperboard. Apply the chlorine dioxide use-solution at a level in order to achieve a residual chlorine dioxide concentration in process water from 0.1 to 5.0 ppm. The necessary dosage will vary with the degree of microbiological and process contamination present.

### **Bacterial Slime Control in Oil Wells and Petroleum Systems**

Use DREWCHLOR 3004 to generate a chlorine dioxide use-solution for use in the remediation of bacterial and sulfide contamination in oilfield production, injection and disposal fluids. Apply the chlorine dioxide use-solution at a level in order to achieve a residual chlorine dioxide concentration of 0.25 – 5.0 ppm. The chlorine dioxide use solution can be applied either continuously or intermittently to oil production water as it is separated from the oil and before it is re-injected into the well. For continuous feeds, the chlorine dioxide use-solution may be applied at dosages slightly higher than sulfide's oxidative demand, as determined by a demand study. For intermittent treatment, the chlorine dioxide use-solution must be applied at shock dosage of 200-3000 ppm.

### **Industrial Cooling Water Treatment (recirculating)**

Use DREWCHLOR 3004 to generate a chlorine dioxide use-solution for controlling bacterial slime, algae and biofilm in industrial recirculating cooling water systems including reverse osmosis systems. Clean badly fouled systems before starting treatment. The required dosages of the chlorine dioxide use-solution will vary depending on the exact application and the degree of contamination present. The required chlorine dioxide residual concentrations range from 0.1 to 5.0 ppm. The chlorine dioxide use-solution can be applied either continuously or intermittently. The typical chlorine dioxide residual concentration range is 0.1 - 1.0 ppm for continuous doses and 0.1 - 5.0 ppm for intermittent doses.

### **Industrial Water Treatment (once-through)**

Use DREWCHLOR 3004 to generate a chlorine dioxide use-solution for controlling mollusks and other contaminants (microbiological and macrobiological) in once-through water systems. The required dosages of the chlorine dioxide use-solution will vary depending on the system type, system conditions, the degree of water contamination present and the desired level of control. Depending on the extent of infestation, the chlorine dioxide use-solution may be applied either continuously or intermittently. The residual concentration of chlorine dioxide ranges from 0.10- 2 ppm for continuous application to 0.1 – 25.0 ppm for intermittent application.

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### STORAGE AND DISPOSAL

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

**STORAGE:** Keep product dry in tightly closed container when not in use. Do not drop, roll or skid drum. Keep upright. Always replace cover. Store this product in a cool, dry area away from direct sunlight and heat to avoid deterioration. In case of spill, flood the area with large quantities of water. Do not reuse empty container.

**PESTICIDE DISPOSAL:** Pesticide wastes are acutely toxic. Improper disposal of excess pesticide 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.

#### **CONTAINER DISPOSAL:**

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

**Important Notice:** Seller warrants that the product conforms to its chemical description and is reasonably fit for the purposes stated on the label under normal conditions of use. The foregoing warranties are exclusive and are in lieu of all other warranties, whether written, oral or implied. The warranties of merchantability and fitness for a particular purpose, in other respects than as expressly set forth herein, are expressly excluded and disclaimed.

**Note:** Buyer assumes all responsibility for safety and use not in accordance with directions.