

Donna L. Butler
Coordinator, Product Safety
PPG Industries, Inc.
One PPG Place - 36 West
Pittsburgh, PA 15272

15 JAN 1992

Subject: Bleach Filter Liquor
EPA Registration No. 748-287
Your Amendment Dated September 27, 1991

Dear Ms. Butler:

This is regard to your resubmitted (in reponse to our letter dated September 11, 1991) label amendment adding of swimming pool water disinfection to the use directions.

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable subject to the comments below. A stamped copy is enclosed for your records.

On the second page of your ft label, under the heading "Pulp and Paper Mill Process Wat - Systems," in the instructions for "Continuous Feed Method," the second set of instructions for "Subsequent Dose" was apparently placed there inadvertently and should be deleted.

Submit five copies of the finished labeling before you release the product for shipment.

If you have any questions about these comments, you may call Wallace Powell at 703-305-6938.

Sincerely,



Ruth G. Douglas
Product Manager (32)
Antimicrobial Program Branch
Registration Division (H-7504C)

BEST AVAILABLE COPY

Enclosure

CONCURRENCES

EPA REG. NO. 748-287
EPA EST. No. 748-WV-1

Hypochlorite Solution
UN1791 RQ
(Calcium Hypochlorite)

ACCEPTED
with COMMENTS
in EPA Letter Dated:

15 JAN 1992

Under the Federal Insecticide,
Fungicide, and Herbicide Act
as amended, for the pesticide
registered under EPA Reg. No.
748-287

KEEP OUT OF REACH OF CHILDREN!!!

DANGER

Active Ingredient: Calcium Hypochlorite 8%
Inert Ingredients: 92%

PRECAUTIONARY STATEMENTS - HAZARDS TO HUMANS AND DOMESTIC ANIMALS.

DANGER - Corrosive, may cause severe skin and eye irritation or chemical burns to broken skin. Causes eye damage. Wear safety glasses or goggles and rubber gloves when handling this product. Wash after handling. Avoid breathing vapors. Vacate poorly ventilated areas as soon as possible. Do not return until strong odors have dissipated.

STATEMENT OF PRACTICAL TREATMENT (FIRST AID): If contact with eyes occurs, flush with water for at least 15 minutes. Get prompt medical attention. If contact with skin occurs, wash with plenty of soap and water. If swallowed, drink large quantities of milk or gelatin solution, if these are not available, drink large quantities of water. Do not give vinegar or other acids. **DO NOT** induce vomiting. Get prompt medical attention.

ENVIRONMENTAL HAZARDS: This product is toxic to fish. Do not discharge into lakes, streams, ponds or public waterways unless in accordance with NPDES permit. For guidance, contact the regional office of the U.S. Environmental Protection Agency. **PHYSICAL OR CHEMICAL HAZARDS: STRONG OXIDIZING AGENT:** 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 irritating to eyes, lungs and mucous membranes.

STORAGE AND DISPOSAL: Store this product in a cool dry area, away from direct sunlight and heat to avoid deterioration. In case of spill, flood areas with large quantities of water. Product or wastes that cannot be used should be diluted with water before disposal in a sanitary sewer. Do not contaminate water, food or feed by storage, disposal or cleaning of equipment. **PESTICIDE DISPOSAL:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. **CONTAINER DISPOSAL:** Triple rinse (or equivalent). Then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

DIRECTIONS FOR USE: It is a violation of federal law to use this product in a manner inconsistent with its labeling. NOTE: This product degrades with age. Use a chlorine test kit and increase dosage, as necessary, to obtain the required level of available chlorine.

SEWAGE & WASTEWATER EFFLUENT TREATMENT: The disinfection of sewage effluent must be evaluated by determining the total number of coliform bacteria and/or fecal coliform bacteria, as determined by the Most Probable Number (MPN) procedure, of the chlorinated effluent has been reduced to or below the maximum permitted by the controlling regulatory jurisdiction. On the

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

PULP AND PAPER MILL PROCESS WATER SYSTEMS: Slug Feed Method - Initial Dose:

When system is noticeably fouled, apply 78 to 156 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 16.5 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 78 to 156 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 16.5 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 to blowdown. Badly fouled systems must be cleaned before treatment is begun.

Continuous Feed Method - Initial Dose: when system is noticeably fouled, apply 78 to 156 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 1.5 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.

Subsequent Dose: When microbial control is evident, add 16.5 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.

Control and keep the chlorine residual at 1 ppm. Badly fouled systems must be cleaned before treatment is begun.

COOLING TOWER/EVAPORATIVE CONDENSER WATER: Slug Feed Method - Initial Dose:

When system is noticeably fouled, apply 78 to 156 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 16.5 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 78 to 156 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 16.5 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 78 to 156 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 1.5 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.

Subsequent Dose: When microbial control is evident, add 16.5 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.

Control and keep the chlorine residual at 1 ppm. Badly fouled systems must be cleaned before treatment is begun.

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 1.5 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.

SWIMMING POOL WATER DISINFECTION: For a new pool or spring start-up, superchlorinate with 78 to 156 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 16.5 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 78 to 156 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 & clean, apply 4.5 oz. of product per 1,000 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 manufacturers' instructions.

Manufactured by:
PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272

**EMERGENCY TELEPHONE NUMBER, PPG INDUSTRIES, INC.,
NATRIUM, WV (304) 843-1300**

L146A-291B

