

748-295

6/30/2009

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



United States
Environmental Protection
Agency

Office of Pesticide Programs

Rob R. Adams, Jr.
Adams Technology Systems
5145 Forest Run Trace - Suite B
Alpharetta, GA 30022-4504

JUN 30 2009

FILE COPY

Subject: PPG Industries, Inc.
PPG Calcium Hypochlorite Tablets
EPA Registration No. 748-295
Application Dated: March 24, 2009
Receipt Dated: April 1, 2009

Dear Mr. Adams:

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

Conditions

1. The routes of exposure for this product must appear in the "First Aid" statement in the following order: If on skin or clothing, If in eyes, If swallowed and If inhaled.
2. The statement "The following PPE information is required to be on the product label **only** when the agricultural use instructions are on the label" is not acceptable for the goggles or face shield. This product is highly corrosive to the eye.
3. The "Container Disposal" language must be updated to comply with PR-Notice 2007-4.
4. The "NSF" logos do not fulfill the agreement between the Agency and NSF International.
5. The first paragraph under "Cooling and retort water treatment compounds" is unacceptable for a FIFRA label and has been removed. This is a Food and Drug Administration (FDA) claim.

"Chemical agents may be added to water used to **cook and cool containers of meat and poultry products . . .**"

6. The last sentence of the "Compounds for treating boilers, steam lines, and/or cooling systems where neither the treated water nor the steam produced may contact edible products."

"This does not include compounds added to water used to cook and cool containers of meat and poultry" [deleted text]

7. The claim against "Water Molds" has been removed. Please provide more information on this use pattern. Explain whether the molds to be treated Chytridiomycota , Oomycota or both.

General Comments

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

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

Sincerely,

for Wanda YH,

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

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[EPA MASTER LABEL COPY – DRAFT 03/09/2009]

PPG CALCIUM HYPOCHLORITE TABLETS
Dry Chlorinating Tablets for Industrial and
Potable Water Treatment Applications

[Note to EPA: The following Optional Marketing Claims may be added to the product label:]

- Potable / Industrial Water Chlorination
- This product provides a steady source of available chlorine.
- Kills Bacteria, Controls Algae, Destroys Organic Contaminants, [REDACTED]
- "Now with Anti-Scale Additive" or "With Scale Inhibitor"
- For organic production

EPA Reg. No. 748-295
EPA Est. No. 58401-IL-1

ACCEPTED
with COMMENTS
EPA Letter Dated:

JUN 30 2009

ACTIVE INGREDIENT:

Calcium Hypochlorite:	68%
OTHER INGREDIENTS:	32%
TOTAL:	100%

Minimum 65% Available Chlorine

Under the Federal Insecticide,
Fungicide, and Rodenticide Act as
amended, for the pesticide,
registered under EPA Reg. No. **748-295**

KEEP OUT OF REACH OF CHILDREN
DANGER

Do not mix with other chemicals.
Always add product to water - Do not add water to product
See additional precautionary statements on back label.

FIRST AID: Contact 1-412-434-4515 or your poison control center for 24-hour emergency medical treatment information. Have the product container or label with you when calling a poison control center or doctor, or going 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 in eyes**, hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice. **If inhaled**, move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice. **If swallowed**, call 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 the poison control center or doctor. Do not give anything by mouth to an unconscious person.

Manufactured by
PPG INDUSTRIES, INC.
One PPG Place
Pittsburgh, PA 15272

Emergency Telephone Number: 1-412-434-4515
NET WT. 100 lbs. (45 kg)

[03/09/2009 EPA pending update, approved xxx]

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

DANGER - Highly Corrosive. Causes irreversible eye damage and skin damage. Do not get in eyes, on skin, or on clothing. Wear goggles or face shield and rubber gloves when handling. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing and shoes before reuse. May be Fatal if swallowed. Irritating to Nose and Throat. Avoid breathing dust.

[REDACTED]

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- A. Goggles or face shield
- B. Long-sleeved shirt and long pants
- C. Waterproof gloves
- D. Shoes plus socks

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

ENVIRONMENTAL HAZARDS: 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 sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

PHYSICAL AND CHEMICAL HAZARDS: Strong oxidizing agent! Mix only with water. Never add water to product. Always add product to large quantities of water. Do not mix with any other chemicals. Use only a clean, dry utensil made of metal or plastic each time product is taken from the container. **Do not add this product to any dispensing device containing remnants of any other product. Such use may cause violent reaction leading to fire or explosion.** Contamination with moisture, acids, organic matter, other chemicals or easily combustible materials such as petroleum or paint products may start a chemical reaction with generation of heat, liberation of hazardous gases and possible generation of a fire or explosion. In case of contamination or decomposition, do not reseal container. If possible isolate container in open air or well-ventilated area. Flood with large volumes of water, if necessary.

STORAGE AND DISPOSAL: Keep in original container in a cool, dry, well-ventilated place. Keep container closed when not in use. Keep away from heat sources, sparks, open flames and lighted tobacco products. Use only a clean, dry utensil made of metal or plastic each time product is taken from the container. **Container Disposal** - Do not reuse container. Residual material remaining in empty container can react to cause fire. Thoroughly flush empty container with water then destroy by placing in trash collection. **Pesticide Disposal** - Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Do not contaminate water, food, or feed by storage or disposal. **In Case of Fire** - Drench with water. Calcium hypochlorite supplies oxygen; therefore, attempts to smother fire with a wet blanket, carbon dioxide, or a dry chemical extinguisher are ineffective. **In Case of Spill or Leak** - Use extreme caution. Contamination may cause fire or violent reaction. If fire or reaction occurs in area of spill, douse with plenty of water. Otherwise sweep up spilled material, using a clean, dry shovel and broom and dissolve spilled material in water. Then immediately use solution as directed.

DIRECTIONS FOR USE:

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

DISINFECTION OF DRINKING WATER (Potable Water):

PUBLIC SYSTEMS

Mix a ratio of 1 ounce of this product to 6000 gallons of water. Begin feeding this solution with a hypochlorinator until a free available chlorine residual of at least 0.2 ppm and no more than 0.6 ppm is attained throughout the distribution system. Check water frequently with a chlorine test kit. Bacteriological sampling must be conducted at a frequency no less than that prescribed by the National 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 ounce of this product into 40 gallons of water. After covering the well, pour the sanitizing solution into the well through both the pipe sleeve opening and the pipeline. Wash the exterior of the pump cylinder also with the sanitizing solution. Start pump and pump water until strong odor of chlorine in water is noted. Stop pump and wait at least 24 hours. After 24 hours flush well until all traces of chlorine have been removed from the water. Contact your local Health Department for further details.

INDIVIDUAL WATER SYSTEMS

Drilled, Driven & Bored Wells - Run pump until water is as free from turbidity as possible. Pour a 100 ppm available chlorine sanitizing solution into the well. This solution can be made by thoroughly mixing 1 ounce of this product into 40 gallons of water. Add 5 to 10 gallons of clean, chlorinated water to the well in order to force the sanitizer into the rock formation. Wash the exterior of pump cylinder with the sanitizer. Drop pipeline into well, start pump and pump water until strong odor of chlorine in water is noted. Stop pump and wait at least 24 hours. After 24 hours flush well until all traces of chlorine have been removed from the water. Deep wells with high water levels may necessitate the use of special methods for introduction of the sanitizer into the well. Consult your local Health Department for further details.

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 grain of this product to 1 gallon of water. One grain is approximately the size of the letter "O" in this sentence. Allow the treated water to stand for 30 minutes. Properly treated water should have a slight chlorine odor, if not, repeat dosage and allow the water to stand an additional 15 minutes. The treated water can then be made palatable by pouring it between clean containers for several times.

OTHER CALCIUM HYPOCHLORITE USES

Calcium Hypochlorite is also used in the sanitization of water systems, municipal water mains, sewage and industrial waste treatment, pulp bleaching, sanitization in the food industry, restaurants, dairies, and hospitals, odor and taste control in potable water systems, algae control in industrial cooling water systems, and general industrial sanitization. For specific literature on these and other accepted uses, write to: PPG Industries, Inc., One PPG Place, Pittsburgh, Pennsylvania 15272.

[Note to EPA: The following symbols may be added to the product label.]



[Note to EPA: The PPG Chlorinator instruction manual and Calcium Hypochlorite brochure have not changed and should remain a part of our labeling as acceptable use directions.]

Cooling Tower and Heat Exchange Surface – A clogged or fouled system should be mechanically cleaned to remove all physical soil prior to beginning treatment. Initially, treat by adding enough calcium hypochlorite to provide 10 ppm available chlorine (2 ounces per 1000 gallons) as a shock dosage and circulate it thoroughly through the system. Then, for continuous preventive control of algae and slime growth, regularly add enough calcium hypochlorite to the recirculation system to maintain a free chlorine residual between 0.5 and 1.0 ppm. Other water condition factors, such as pH, should be controlled as recommended by the equipment manufacturer.

PPG calcium hypochlorite tablets can serve an important role in control of Legionella bacteria in cooling water towers. A concentration of 2 ppm free available chlorine has been shown to be capable of killing free Legionella pneumophila bacteria. Legionella bacteria can, however, survive chlorination when shielded inside amoebae, other protozoa or slime, so it is important to have an overall Legionella control strategy that includes controlling the growth of these other organisms and microbial communities and limiting the supply of micronutrients that sustain such microbial growth. Regular chlorination with calcium hypochlorite can help to limit the supply of assimilable organic carbon (AOC) in the water. These recommendations are based on best practices from the industry, but are presumptive in nature. PPG Calcium Hypochlorite Tablets have not been tested for effectiveness against Legionnaires Disease Bacteria (LDB). There is no evidence that chemical treatment will control the growth of LDB under actual operating conditions, reduce transmission of LDB, or prevent Legionnaires' disease.

COOLING TOWER / EVAPORATIVE CONDENSER WATER:

Slug Feed Method – Initial dose: When system is noticeably fouled, apply 10 to 20 ounces of this product per 10,000 gallons of water in the system to obtain 5 to 10 ppm available chlorine. Repeat until control is achieved. **Subsequent dose:** When microbial control is evident, add 1 to 2 ounces 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 1.0 ppm. Badly fouled system must be cleaned before treatment is begun.

Intermittent Feed Method – Initial dose: When system is noticeably fouled, apply 10 to 20 ounces 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 1 to 2 ounces of this product per 10,000 gallons of water in the system to obtain a 1.0 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 system must be cleaned before treatment is begun.

Continuous Feed Method – Initial dose: When system is noticeably fouled, apply 10 to 20 ounces 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 ounce of this product per 3,000 gallons of water lost by blowdown to maintain a 1.0 ppm residual. Badly fouled system must be cleaned before treatment is begun.

Briquettes or Tablets – Initial dose: Initially slug dose the system with 10 ounces of this product per 10,000 gallons of water in the system. Badly fouled system must be cleaned before treatment is begun. **Subsequent dose:** When microbial control is evident, add 1 to 2 ounces 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 1.0 ppm. Badly fouled system must be cleaned before treatment is begun.

SANITIZATION OF NONPOROUS FOOD CONTACT SURFACES:

RINSE METHOD - A solution of 100 ppm available chlorine may be used in the sanitizing solution if a chlorine test kit is available. Solutions containing an initial concentration of 100 ppm available chlorine must be tested and adjusted periodically to insure that the available chlorine does not drop below 50 ppm. Prepare a 100 ppm sanitizing solution by thoroughly mixing 1 ounce of this product with 40 gallons of water. If no test kit is available, prepare a sanitizing solution by thoroughly mixing 1 ounce of this product with 20 gallons of water to provide approximately 200 ppm available chlorine by weight. Clean equipment surfaces in the normal manner. Prior to use, rinse all surfaces thoroughly with the sanitizing solution, maintaining contact with the sanitizer for at least 2 minutes. If solution contains less than 50 ppm available chlorine, as determined by a suitable test kit, either discard the solution or add sufficient product to reestablish a 200 ppm residual. Do not rinse equipment with water after treatment and do not soak equipment overnight. Sanitizers used in automated systems may be used for general cleaning but may not be reused for sanitizing purposes.

IMMERSION METHOD - A solution of 100 ppm available chlorine may be used in the sanitizing solution if a chlorine test kit is available. Solutions containing an initial concentration of 100 ppm available chlorine must be tested and adjusted periodically to insure that the available chlorine does not drop below 50 ppm. Prepare a 100 ppm sanitizing solution by thoroughly mixing 1 ounce of this product with 40 gallons of water. If no test kit is available, prepare a sanitizing solution by thoroughly mixing 1 ounce of this product with 20 gallons of water to provide approximately 200 ppm available chlorine by weight. Clean equipment in the normal manner. Prior to use, immerse equipment in the sanitizing solution for at least 2 minutes and allow the sanitizer to drain. If solution contains less than 50 ppm available chlorine, as determined by a suitable test kit, either discard the solution or add sufficient product to reestablish a 200 ppm residual. Do not rinse equipment with water after treatment. Sanitizers used in automated systems may be used for general cleaning but may not be reused for sanitizing purposes.

FLOW/PRESSURE METHOD - Disassemble equipment and thoroughly clean after use. Assemble equipment in operating position prior to use. Prepare a volume of a 200 ppm available chlorine sanitizing solution equal to 110% of volume capacity of the equipment by mixing the product in a ratio of 1 ounce product with 20 gallons of water. Pump solution through the system until full flow is obtained at all extremities, the system is completely filled with the sanitizer and all air is removed from the system. Close drain valves and hold under pressure for at least 2 minutes to insure contact with all internal surfaces. Remove some cleaning solution from drain valve and test with a chlorine test kit. Repeat entire cleaning/sanitizing process if effluent contains less than 50 ppm available chlorine.

CLEAN-IN-PLACE METHOD - Thoroughly clean equipment after use. Prepare a volume of 200 ppm available chlorine sanitizing solution equal to 110% of volume capacity of the equipment by mixing the product in a ratio of 1 ounce product with 20 gallons of water. Pump solution through the system until full flow is obtained at all extremities, the system is completely filled with the sanitizer and all air is removed from the system. Close drain valves and hold under pressure for at least 10 minutes to insure contact with all internal surfaces. Remove some cleaning solution from drain valve and test with a chlorine test kit. Repeat entire cleaning/sanitizing process if effluent contains less than 50 ppm available chlorine.

SPRAY/FOG METHOD - Preclean all surfaces after use. Use a 200 ppm available chlorine solution to control bacteria, mold or fungi and a 600 ppm solution to control bacteriophage. Prepare a 200 ppm sanitizing solution of sufficient size by thoroughly mixing the product in a ratio of 1 ounce product with 20 gallons of water. Prepare a 600 ppm solution by thoroughly mixing the product in a ratio of 3 ounces product with 20 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 3 ounces of this product with 20 gallons of water. Clean surfaces in the normal manner. Rinse all surfaces thoroughly with the 600 ppm solution, maintaining contact for at least 2 minutes. Prepare a 200 ppm sanitizing solution by thoroughly mixing 1 ounce of this product with 20 gallons of water. Prior to using equipment, rinse all surfaces with a 200 ppm available chlorine solution. Do not rinse and do not soak equipment overnight.

IMMERSION METHOD - Prepare a 600 ppm solution by thoroughly mixing, in an immersion tank, 3 ounces of this product with 20 gallons of water. Clean equipment in the normal manner. Prepare a 200 ppm sanitizing solution by thoroughly mixing 2 ounces of this product with 10 gallons of water. Prior to using, immerse equipment in the 200

ppm sanitizing solution for at least 2 minutes and allow the sanitizer to drain. Do not rinse and do not soak equipment overnight.

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 3 ounces product with 20 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 with a 200 ppm available chlorine solution. Prepare a 200 ppm sanitizing solution by thoroughly mixing 1 ounce of this product with 20 gallons of water.

SANITIZATION OF NONPOROUS NON-FOOD CONTACT SURFACES:

RINSE METHOD - Prepare a sanitizing solution by thoroughly mixing 1 ounce of this product with 20 gallons of water to provide approximately 200 ppm available chlorine by weight. Clean equipment surfaces in the normal manner. Prior to use, rinse all surfaces thoroughly with the sanitizing solution, maintaining contact with the sanitizer for at least 2 minutes. Do not rinse equipment with water after treatment and do not soak equipment overnight.

IMMERSION METHOD - Prepare a sanitizing solution by thoroughly mixing, in an immersion tank, 1 ounce of this product with 20 gallons of water to provide approximately 200 ppm available chlorine by weight. Clean equipment in the normal manner. Prior to use, immerse equipment in the sanitizing solution for at least 2 minutes and allow the sanitizer to drain. Do not rinse equipment with water after treatment.

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 1 ounce product with 20 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.

DISINFECTION OF NONPOROUS NON-FOOD CONTACT SURFACES:

RINSE METHOD - Prepare a disinfecting solution by thoroughly mixing 3 ounces of this product with 20 gallons of water to provide approximately 600 ppm available chlorine by weight. Clean equipment surfaces in the normal manner. Prior to use, rinse all surfaces thoroughly with the disinfecting solution, maintaining contact with the solution for at least 10 minutes. Do not rinse equipment with water after treatment and do not soak equipment overnight.

IMMERSION METHOD - Prepare a disinfecting solution by thoroughly mixing, in an immersion tank, 3 ounces of this product with 20 gallons of water to provide approximately 600 ppm available chlorine by weight. Clean equipment in the normal manner. Prior to use, immerse equipment in the disinfecting solution for at least 10 minutes and allow the solution to drain. Do not rinse equipment with water after treatment.

SANITIZATION OF POROUS NON-FOOD CONTACT SURFACES:

RINSE METHOD - Prepare a sanitizing solution by thoroughly mixing 3 ounces of this product with 20 gallons of water to provide approximately 600 ppm available chlorine by weight. Clean equipment surfaces in the normal manner. Prior to use, rinse all surfaces thoroughly with the sanitizing solution, maintaining contact with the sanitizer for at least 2 minutes. Do not rinse equipment with water after treatment and do not soak equipment overnight.

IMMERSION METHOD - Prepare a sanitizing solution by thoroughly mixing, in an immersion tank, 3 ounces of this product with 20 gallons of water to provide approximately 600 ppm available chlorine by weight. Clean equipment in the normal manner. Prior to use, immerse equipment in the sanitizing solution for at least 2 minutes and allow the sanitizer to drain. Do not rinse equipment with water after treatment.

SPRAY/FOG METHOD - After cleaning, sanitize non-food contact surfaces with 600 ppm available chlorine by thoroughly mixing the product in a ratio of 3 ounces of this product with 20 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 area for at least 2 hours.

Fruit & Vegetable Washing: Thoroughly clean all fruits and vegetables in a wash tank: Thoroughly mix 1 ounce of this product in 200 gallons of water to make a sanitizing solution of 25 ppm available chlorine. After draining the tank, submerge fruit or vegetables for two minutes in a second wash tank containing the recirculating sanitizing solution. Spray rinse vegetables with the sanitizing solution prior to packaging.

Commodity Fruit & Vegetable Treatment: Wash fruits and vegetables to remove organic matter; then treat as noted below.

Table of Recommended Levels and Use Dilutions for Available Chlorine

Commodity	Usage Dilution dry oz. added to 250 gal. of water	(ppm) Available Chlorine	Contact Time
Apple	7.7 - 10.3	150 - 200	45-90 sec.(dump tank) 5-15 sec. (spray)
Artichoke	5.1 - 7.7	100 - 150	5-15 sec. (spray)
Asparagus	6.4 - 7.7	125 - 150	5-15 sec. (spray) 20-30 min.(hydrocooler)
Brussels Sprouts	5.1 - 7.7	100 - 150	5-15 sec. (spray)
Carrots	5.1 - 10.3	100 - 200	1-5 min. (dump tank) 1-5 min. (flume)
Cauliflower	15.4 - 20.5	300 - 400	5-15 sec. (spray)
Celery	5.1 - 5.7	100 - 110	5-15 sec. (spray)
Cherry	3.9 - 5.1	75 - 100	5-15 sec. (spray)
Chopped Cabbage ¹	4.1 - 5.1	80 - 100	5-15 sec. (spray)
Chopped Lettuce ¹	4.1 - 5.1	80 - 100	5-15 sec. (spray)
Citrus Fruits	1.3 - 10.3	40 - 75 30 - 50 100 - 200	5-15 sec. (spray) 2-3 min. (dump tank) 3-5 min. (drench)
Cucumbers	15.4 - 18.0	300 - 350	5-15 sec. (spray)
Green Onions	3.9 - 6.2	75 - 120	5-15 sec. (spray)
Melons	5.1 - 7.7	100 - 150 30 - 75	5-15 sec. (spray) 20-30 min.(hydrocooler)
Peaches, Nectarines and Plums	2.6 - 5.1	50 - 100	5-15 sec. (spray)
Pears (without buffer)	10.3 - 15.4	200 - 300	2-3 min. (dump tank)
Peppers	15.4 - 20.5 5.1 - 6.9	300 - 400 100 - 135	5-15 sec. (spray) 2-5 min. (dump tank)
Potatoes	3.3 - 6.4	65 - 125	2-5 min.(dump tank)(30-100ppm) 2-5 min. (flume)(200-300ppm) 5-30 sec.(spray)(100-200ppm)
Radishes	5.1 - 7.7	100 - 150	5-15 sec. (spray)
Stonefruit	1.5 - 3.9	30 - 75	20-30 min. (hydrocooler)
Tomatoes	15.4 - 18.0	300 - 350	2-3 min (tank)(200-350 ppm) 5-15 sec.(spray)(100-150ppm)

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

FOOD PROCESSING

Authorized by USDA for use in federally inspected meat and poultry plants.

Chlorine potable water treatment compounds.

Chlorine may be present in processing water of meat and poultry plants at concentrations up to 5 parts per million calculated as available chlorine. Also, chlorine may be present in poultry chiller intake water, and in carcass wash water at concentrations up to 50 parts per million calculated as available chlorine. Chlorine must be dispensed at a constant and uniform level and the method or system must be such that a controlled rate is maintained.

Cooling and retort water treatment compounds.

Chemical agents may be added to water used to cool and cook containers of meat and poultry products to prevent staining of containers and to control corrosion and deposit formation on surfaces of processing equipment. The amount used should be the minimum sufficient for the purpose.

Calcium hypochlorite solutions providing 1% available chlorine should be fed into tanks or channels by an elevated tank to provide a concentration of 2 ppm available chlorine. The flow may be controlled with a noncorroding valve or a pinch-stop on a rubber hose.

Feed points should be located to provide uniform distribution of solution throughout the entire system. Long and narrow tanks may require the solution to be fed at two points to insure proper distribution.

Test the water for available chlorine. If a residual of 2 ppm is present throughout the system, the water is properly sanitized.

Test for available chlorine every hour until dosage requirements are established. Thereafter, check every 2 or 3 hours to ascertain that an available chlorine residual of 2 ppm is maintained throughout the system.

Compounds for treating boilers, steam lines, and/or cooling systems where neither the treated water nor the steam produced may contact edible products.

A clogged or fouled system should be mechanically cleaned to remove all physical soil prior to beginning treatment. Initially, treat by adding enough calcium hypochlorite to provide 10 ppm available chlorine (2 ounces per 1000 gallons) as a shock dosage and circulate it thoroughly through the system.

Then, for continuous preventative control of algae and slime growth, regularly add enough calcium hypochlorite to the recirculation system to maintain a 1.0 ppm free chlorine residual.

Other water condition factors, such as pH, should be controlled as recommended by the equipment manufacturer.

Shell Egg Cleaning:

Wash eggs promptly after gathering. Water with an iron content in excess of 2 ppm shall not be used unless equipment capable of removing the excess iron is installed on the water system. Wash water temperature should be 90°F or higher. Maintain the wash water at a temperature which is at least 20°F warmer than the temperature of the eggs to be washed. Spray rinse washed eggs with warm potable water containing an approved sanitizing compound. Eggs should be reasonably dry before casing or breaking.

Shell Egg Destainers:

The destainer solution must be at least 20°F warmer than the eggs with a minimum solution temperature of 90°F. Total elapsed time in the destainer solution may not exceed 5 minutes. Eggs are to be re-washed and spray rinsed after destaining. Destainer solution should be replaced daily or whenever it becomes dirty. Destaining is to be done after initial washing has been completed. It is recommended that all eggs be shell protected after they have been destained.

LAUNDRY SANITIZERS

Household Laundry Sanitizers - In Soaking Suds - thoroughly mix 1 tbsp. of this product to 10 gallons of wash water to provide 200 ppm available chlorine. Wait 5 minutes, then add soap or detergent. Immerse laundry for at least 11 minutes prior to starting the wash/rinse cycle. - In Washing Suds - thoroughly mix 1 tbsp. of this product to 10 gallons of wash water containing clothes to provide 200 ppm available chlorine. Wait 5 minutes then add soap or detergent and start the wash/rinse cycle.

Commercial Laundry Sanitizers - Wet fabrics or clothes should be spun dry prior to sanitization. Thoroughly mix 1 oz. of this product with 20 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 solution has been allowed to stand. Add more of this product if the available chlorine level has dropped below 200 ppm.

[NOTE to EPA: The PPE information noted above will be applied to the product label only when these agricultural use instructions are on the label.]

DIRECTIONS FOR USE

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

AGRICULTURAL USE REQUIREMENTS:
Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirement for the protection of agricultural workers on farms, forests, nurseries, greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Workers Protection Standard.

The Restricted-Entry Interval (REI) is 0 days when using this product.

There are no posting or notification requirements when using this product.

Personal Protective Equipment should be worn as described under the "Precautionary Statements" section of this label.

DIRECTIONS FOR THE CONTROL OF BACTERIA, ALGAE, SLIME BUILD-UP AND CLOGGING IN SPECIFIED IRRIGATION SYSTEMS

Directions for the control of bacteria, algae, [redacted] and slime inside agricultural irrigation systems only.

PPG Calcium Hypochlorite Tablets are designed to be used in tablet chlorinator systems. The tablets provide a minimum of 65% available chlorine. The tablets are placed in the chlorinator and the bottom layer of tablets is eroded as water flows through the chlorinator. The inlet water flow controls the rate of chlorination; higher flows result in higher delivery of available chlorine. The Application Rates section provides the levels of free residual chlorine needed to prevent or address bio-fouling occurring in drip/trickle irrigation systems. Consult the instruction manual for the chlorinator system to determine how to achieve this level with the tablet chlorinator in use.

This product is to be applied through irrigation systems only for agricultural crops only where this manner of use will not cause crop damage.

This product is only for controlling bacteria, algae, [redacted] and slime inside irrigation systems. This product is not intended to control bacteria, fungi, and other pests that are already present in the field or on or in the agricultural crop that is being irrigated and shall not be recommended or used for that purpose.

APPLICATION RATES

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

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

Superchlorination, bringing concentrations to as much as 100 ppm total available chlorine, is recommended for reclaiming low-volume irrigation systems if clogged by algae and bacterial slimes. Set the chlorinator to deliver 100 ppm in the drip system and monitor the free chlorine residual at the end of the farthest lateral. As soon as it is established that the free residual reading is between 10 and 20 ppm, shut the system down and leave it undisturbed

for up to 24 hours. Then flush all submains and laterals with fresh water. Superchlorination will not dissolve/remove scale or inorganic sediment fouling.

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

GENERAL APPLICATION INSTRUCTIONS

Chlorination should be started during irrigation early enough to establish the desired free chlorine concentration throughout the system being treated.

Apply this product upstream of the filter to help keep the filter clean.

Determine the level of free chlorine as described above, using a free chlorine test kit. Allow sufficient time to achieve a steady reading.

DO NOT apply this product when fertilizers, herbicides, and insecticides are being injected since they will consume the available chlorine and may produce toxic reaction products.

Shut down the product feed as soon as the irrigation water is switched to the next irrigation sector. Leave the treated water residing in the section that has been shut down.

Refer to the chlorinator use instructions as needed.

SENSITIVE PLANT SPECIES

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

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

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

[NOTE to EPA: The following is alternative irrigation systems use (Chemigation) directions requested by the State of Washington:]

PPG Calcium Hypochlorite Tablets are designed to be used in tablet chlorinator systems. The tablets provide a minimum of 65% available chlorine. The tablets are placed in the chlorinator and the bottom layer of tablets is eroded as water flows through the chlorinator. The inlet water flow controls the rate of chlorination; higher flows result in higher delivery of available chlorine. The Application Rates section below provides the levels of free residual chlorine needed to prevent or address bio-fouling occurring in drip/trickle irrigation systems. Consult the instruction manual for the chlorinator system to determine how to achieve this level with the tablet chlorinator in use.

CHEMIGATION PROVISIONS:

Irrigation Water Conveyance and Injection System

1. Apply this product only through drip emitters. Do not apply this product through any other type of irrigation system.
2. The irrigation system must provide uniform distribution of treated water. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.
3. The injection apparatus and irrigation system must be calibrated and maintained to uniformly apply the rates specified. The system must be calibrated to uniformly apply the rates specified. If you have questions about calibration, you should contact State Extension Specialists, equipment manufacturers, or other experts.
4. Do not connect any irrigation system (including greenhouse systems) used for a pesticide application to a public water system unless the pesticide-label prescribed safety devices for public water systems are in place and are properly functioning.
5. A person knowledgeable of the chemigation system and responsible for its operation, or someone under the direct supervision of the responsible person, shall start up or shut down the system and make any necessary adjustments, including calibration and monitoring.

Specific Irrigation System Requirements

1. The irrigation system must contain a functional check valve, vacuum relief valve, inspection port, and low-pressure drain that are appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the pesticide injection system.
3. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the pesticide injection system and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
4. The system must contain functional interlocking controls (e.g., pressure switch or flow meter) to automatically shut off the pesticide injection system when the water pump motor stops or, in cases where there is no water pump, when the water pressure or water flow decreases to the point where pesticide distribution is adversely affected.
5. The irrigation mainline or water pump must include a functional pressure switch that will stop the water pump motor when the water pressure or the water flow decreases to the point where pesticide distribution is adversely affected.
6. Systems must be effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an alternative to a RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of a least twice the inside diameter of the fill pipe.

Functionally Equivalent Substituted Devices

Alternative technology referenced in USEPA's "List of Alternative Chemigation Safety Equipment" may be substituted for specific backflow prevention devices.

Please Note: State chemigation rules may require antipollution devices or protective measures in addition to those specified hereinabove.

APPLICATION INSTRUCTIONS:

General Guidelines

1. Before chlorination is undertaken, a water quality analysis should be performed to quantify inorganic solids such as sand and silt; organic solids such as algae, bacteria, and slime; dissolved solids such as iron, sulfur, sodium chlorides, and calcium; and pH of the water.
2. If pH of the water is above 7.5, the water must be acidified if chlorination is to be effective.
3. The application concentration and application frequency should be based on the water analysis.
4. To correctly establish the dose setting required, it is necessary to measure the free chlorine concentration (ppm) at the end of the treated increment in the field and adjust the dose setting until the desired free chlorine concentration is obtained. This is because contaminants in the water may consume available chlorine resulting in a concentration that is less than the concentration desired. Only experience can establish the actual chlorinator settings required to provide the amount of free chlorine at the end of the farthest lateral (and consequent treatment of the irrigation system).
5. Normally the treatment level at the end of the farthest lateral will be 1-2 ppm free chlorine.
6. When determining free (that is, residual or available) chlorine, use a chlorine test kit that is capable of measuring the concentration of free chlorine, not total chlorine.
7. Refer to the Feed Rate Table in the instruction manual to determine the feed-rate requirement for a predetermined water volume at a desired available chlorine dose level.

Application Rates – Continuous Feed

1. If the irrigation water has high levels of nutrients causing bacterial, algal, or other bio-fouling that reduces system performance, continuous use of this product may be necessary. The recommended level of free residual chlorine for continuous feed is 1 to 2 ppm "free" or "residual" chlorine, measured at the end of the farthest lateral.
2. Inject a sufficient amount of this product into the irrigation system to obtain 1 to 5 ppm available (i.e., residual or free) chlorine, and until a concentration of 1 to 2 ppm of free chlorine is measured at the distant end of the irrigation distribution system. Use a chlorine test kit that is capable of measuring the concentration of free chlorine, not total chlorine.

Application Rates – Shock Treatment

1. Periodic shock treatments at a higher available chlorine rate of up to 20 ppm free residual may be appropriate where bacteria and/or algae clogging and build-up are not managed by maintaining a continuous residual. The frequency of the shock application depends upon the frequency and extent of bio-clogging.
2. Perform shock treatment at the end of the irrigation cycle for the length of time that is necessary to fill the entire irrigation system. The chlorinated water must be flushed from the irrigation system at completion of the shock treatment.

Application Rates – Superchlorination

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

GENERAL SYSTEM MAINTENANCE:

Chemical Injection System

To accurately apply pesticides, the injection system must be kept clean, free of chemical or fertilizer residues and sediments. Refer to the owner's manual or ask your equipment supplier for the cleaning procedure for your injection system.

Flushing the Irrigation System

At the end of the application, allow time for the distribution and application system to flush the pesticide through all the nozzles or emitters before turning off the irrigation water. To ensure that the system is flushed of treated water, a dye indicator may be injected into the system to mark the end of the application, or flush for an equal length of time necessary to fully charge the irrigation system.

ENVIRONMENTAL CONDITIONS:

Spray Drift Reduction Management

Do not apply when wind speed favors drift beyond the area intended for treatment. The interaction of many equipment and weather related factors determine the potential for spray drift. The applicator is responsible for considering all of these factors when making application decisions. Avoiding spray drift is the responsibility of the applicator.

Runoff

Irrigation applications must be conducted in a manner to prevent surface runoff from the treatment site.

Wind Speed Restrictions

Drift potential increases at wind speeds less than 3 mph (due to the potential for temperature inversions) or more than 10 mph. However, many factors, including droplet size, plant canopy, temperature, relative humidity, release height, and equipment specifications, determine drift potential at any given wind speed. Do not apply when wind is greater than 15 mph and avoid gusty and windless conditions. Risk of exposure to sensitive areas can be reduced by avoiding applications when wind direction is toward a sensitive area

ENDANGERED SPECIES:

The use of any pesticide in a manner that may kill or otherwise harm an endangered species or adversely modify their habitat is a violation of Federal law. It is the applicator's responsibility, as a condition of using this product, to verify environmental restrictions and to comply with site-specific mitigation as specified in USEPA Endangered Species Protection Program bulletins.