



## OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

WASHINGTON, D.C. 20460

November 20, 2023

Sherri Gray  
Authorized Representative  
T.A. Comb, LLC  
Electronic Transmittal: sherrigrayconsulting.com

Subject: Notification per PRN 98-10 – Application to Add an Alternate Brand Name.  
Product Name: “Pure 3000”  
EPA Registration Number: 88341-8  
Received Date: September 9, 2023  
Action Case Number: 00456909

Dear Ms. Gray:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 for the above referenced product. The Antimicrobials Division (AD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10.

The label submitted with the application has been stamped “Notification” and will be placed in our records.

Should you wish to add/retain a reference to the company’s website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) lists examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product’s label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA’s Office of Enforcement and Assurance.

If you have any questions, please contact Michael Varco at 202-566-0667 or by email at [Varco.Michael@epa.gov](mailto:Varco.Michael@epa.gov).

Sincerely,

(for) Demson Fuller, Product Manager 32  
Regulatory Management Branch I  
Antimicrobials Division (7510P)  
Office of Pesticide Programs

**NOTIFICATION**

88341-8

The applicant has certified that no changes, other than those reported to the Agency have been made to the labeling. The Agency acknowledges this notification by letter dated:

11/20/2023

**[Pure 3000]**

**[PureCIP]**

This product is intended for the purification of water which has previously been treated in accordance with the Safe Drinking Water Act (SDWA), such as that provided by municipal water treatment facilities. Intended applications include: Treatment of Potable Water and Cooling Water in Hospitals & Healthcare Facilities, Nursing Homes, Hotels, Commercial Office Buildings, Government Buildings, Residential Buildings, and Ships; Treatment of Industrial Process Water, Food Processing Water, Livestock Drinking Water, Human Potable Water Systems, and Process Water Systems, and Control of Slime in Cooling Towers.

**ACTIVE INGREDIENT:**

CHLORINE DIOXIDE.....	0.30%
INERT INGREDIENTS.....	99.70%
TOTAL.....	100.00%

Pure 3000 contains 3,000 ppm (3,000 mg/liter) chlorine dioxide

**KEEP OUT OF REACH OF CHILDREN  
CAUTION**

<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 eyes.</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>▪ Remove contaminated clothing.</li> <li>▪ Rinse exposed skin immediately with plenty of water for 15-20 minutes.</li> <li>▪ Call a poison control center or doctor immediately for treatment.</li> </ul>
<b>IF SWALLOWED</b>	<ul style="list-style-type: none"> <li>▪ Call a 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 a 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.</li> <li>▪ Call a poison control center or doctor for further treatment advice.</li> </ul>
<i>NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate for the use of gastric lavage.</i>	
<b>HOTLINE NUMBERS</b> For chemical spill information call CHEMTREC: 1-800-424-9300. For emergency medical information, call the National Pesticide Information Center at 1-800-858-7378. Have the product container or label with you when calling a poison control center or doctor or going for treatment.	

EPA Reg. No. 88341-8  
EPA Est. No.

Manufactured for:  
T.A. Comb, LLC  
1241 N Ellis  
Bensenville, IL 60106

Net Contents:

**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS & DOMESTIC ANIMALS  
CAUTION**

Causes moderate eye irritation. Harmful if swallowed, absorbed through the skin, or inhaled. Avoid contact with eyes, skin, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.

Handlers applying chlorine dioxide in an occupational setting must wear appropriate chemical resistant gloves. People must vacate the premises during spraying treatments. [For spraying operations] User must wear a half-face respirator with acid gas cartridge and N95 filter.

**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**

Chlorine dioxide is a strong oxidizing agent. Contamination with materials such as acids, chlorine, and organic chemicals may cause a chemical reaction resulting in evolution of chlorine dioxide and heat explosion and/or fire could result. Keep all chemicals and foreign material away from this solution.

**STORAGE AND DISPOSAL**

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

**PESTICIDE STORAGE:** Keep containers tightly when not in use. Store in original container in a dark, dry place away from extremes of heat or freezing conditions. Do not store with easily oxidizable materials, acids, bases, or combustible materials.

**This product is to be used as directed within 9 months of the manufacture date indicated on the front panel of this label.**

**PESTICIDE DISPOSAL:** Pesticide wastes are acutely hazardous. Improper disposal of pesticide, prepared solutions, or rinsate is a violation of Federal law. If these wastes cannot be disposed of according to label directions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

**CONTAINER HANDLING:**

Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying [For product 5 gallons or less] Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container with ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal.

Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times [For product containers greater than 5 gallons] Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or a mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling, or puncture and dispose of in a sanitary landfill or by incineration, or if allowed by local and State authorities, by burning. If burned, stay out of smoke.

### **DIRECTIONS FOR USE**

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

Pure 3000 is a chlorine dioxide product designed to purify water which has previously been treated in accordance with the Safe Drinking Water Act (SDWA) including: potable water and cooling water in hospitals & healthcare facilities, nursing homes, hotels, commercial office buildings, government buildings, residential buildings, and ships: industrial process water; food processing water; livestock drinking water. Pure 3000 also is designed to control slime in cooling towers. Pathogenic organisms controlled include *Raoutella terrigena*, Poliovirus and Rotavirus. Concentration and contact times are application specific. Minimum contact time for control of listed pathogenic organisms is 5 minutes.

Pure 3000 may be used in the treatment of fruits and vegetables, poultry and red meat.

**Carefully read and follow the instructions for the Pure 3000 dosing equipment provided by the manufacturer or its authorized agent.**

Pure 3000 is intended for use in water systems which use as their source treated municipal water including:

- Hospitals
- Nursing homes
- Schools & public buildings
- Office Buildings
- Hotels
- Residential Buildings
- Food processing plants
- Beverage production facilities

Pure 3000 may be used to treat water that is not subject to the SWDA for use as non-potable water or water not intended for human consumption.

**Minimum contact time for control of listed pathogenic organisms is 5 minutes.**

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**\*NOT FOR USE IN CALIFORNIA**

**Agricultural Premises and Equipment**

**\*TREATMENT OF AGRICULTURAL STORAGE FACILITIES**

Before treatment, all vehicles (containers, trailers, rail cars, vessels) must be cleaned with water to remove debris and dirt. Add Pure 3000 to water at a dose of 300 ppm (300.0 mg/liter) chlorine dioxide (a dilution ratio 1:10). Pour 2.5 quarts of diluted Pure 3000 into a foaming wand tank capable of delivering 4-6 gallons of water per minute. Allow surfaces to remain wet for at least 10 minutes. The diluted Pure 3000 may be irritating if inhaled. For spraying operations, user must wear a half-face respirator with acid gas cartridge and N95 filter.

**SHOE BATH USE**

Add Pure 3000 to shoe bath water to make the chlorine dioxide 1-5 ppm solution (dilution ratio of 1:3000-1:600) of shoe bath water. Change shoe bath solution daily or when solution appears soiled.

**DISINFECTION OF POULTRY CHILLER WATER/CARCASS SPRAY AND DIP WATER**

When used in a prechiller or chiller tank, add Pure 3000 to water at a dose of 0.5-3 ppm (0.5-3.0 mg/liter) chlorine dioxide (a dilution ratio 1:6000-1:1000).

When used as a carcass spray or dip solution, add Pure 3000 to water at a maximum dose of 10 ppm (10.0 mg/L)(a dilution ratio of 1:300) to maintain a maximum residual of 3 ppm (3.0 mg/L) chlorine dioxide (a dilution ratio of 1:1000). Adjust feed dosage to maintain 3 ppm (3.0 mg/L) residual measured immediately following the carcass spray or in the dip solution.

Handlers applying chlorine dioxide in an occupational setting must wear gloves.

**TREATMENT OF POULTRY DRINKING WATER**

If the water supply has heavy contamination, prepare a solution of 5.0 ppm available chlorine dioxide by adding Pure 3000 to water at a dose of 5.0 ppm (5.0 mg/liter) chlorine dioxide (a dilution ratio 1:600). Allow 15 minutes before delivery to poultry. After 24 hours, the addition rate can be reduced to 1 ppm chlorine dioxide by adding Pure 3000 to water at a dose of 1 mg/liter chlorine dioxide (a dilution ratio 1:3000) as long as terminal concentration at end of waterline is not less than 0.5 ppm. Treat water continuously from day one. Remove Pure 3000 from drinking water 24 hours prior to vaccination, then resume treatment 24 hours after vaccinations.

**\*TREATMENT OF EGG ROOM**

When using a high pressure sprayer, add Pure 3000 to water at a dose of 20.0 ppm (20.0 mg/liter) chlorine dioxide (a dilution ratio 1:150) as a prewash to remove gross filth or heavy soil. If it is necessary to clean the floors by mopping, add Pure 3000 to water at a dose of 400 ppm (400 mg/liter) chlorine dioxide (a dilution ratio 1:7.5). Allow Pure 3000 to dry on floor. Spray hard non-porous surfaces within the entire area with a 1,000 ppm solution of chlorine dioxide (1

gallon Pure 3000 per 3 gallons water) for 5 minutes, being sure to cover walls, ceiling, floors, work tables and benches. Allow to dry for 1 hour or overnight, if possible, before resuming operations. People must vacate the premises during this treatment.

Washing and spraying operations should be conducted once a week, or more frequently in cases of heavy contamination during operations.

A shoe or boot bath of 1000 ppm chlorine dioxide (a dilution ratio of 1:3) is placed at the entrance to the egg room. Doors to the room should be kept closed at all times. A glove dip, or rinse tank or basin, containing 50 ppm chlorine dioxide (a dilution ratio of 1:60) is used on entering and exiting the room.

Both the shoe and boot bath and glove dip should be replaced daily or sooner if traffic is heavy.

Humidifier water is treated with 40 ppm chlorine dioxide (a dilution ratio of 1:75) to prevent the build-up and airborne spread of odor-causing microorganisms.

Provide 20 ppm chlorine dioxide (a dilution ratio of 1:150) to the water supply in the egg washing machine.

#### \*TREATMENT OF HATCHING ROOM

- 1) As soon as chicks are separated from Hatch, remove all trash containers with eggshells, down, etc. from the hatching area.
- 2) Remove all poultry and feeds from premises, trucks, coops and crates.
- 3) Remove all litter and droppings from floors, walls and surfaces of facilities occupied or traversed by poultry.
- 4) Empty all troughs, racks and other feeding and watering appliances.
- 5) Thoroughly clean all surfaces with soap or detergent and rinse with water.
- 6) Spray hard, non-porous surfaces within the entire area with a 1000 ppm solution of chlorine dioxide (a dilution ratio of 1:3). Allow a 10 minute contact time. People must vacate the premises during spraying treatments.
- 7) After treatment, ventilate buildings, coops or other enclosed spaces. Do not house poultry or employ equipment until treatment has been absorbed, set or dried.
- 8) Thoroughly scrub treated feed racks, troughs, automatic feeders, fountains and waterers with soap or detergent and rinse with potable water before reuse.
- 9) All workers in this area should use a hand dip or rinse containing 50 ppm chlorine dioxide (a dilution ratio of 1:60)

#### \*TREATMENT OF INCUBATOR ROOM

Remove gross filth or soil with a high pressure water wash. Spray hard, non-porous surfaces within the area with 1,000 ppm chlorine dioxide once a week for 5 minutes. Wet all surfaces and allow to dry. The floors should be mopped daily with a solution containing 400 ppm (400 mg/liter) chlorine dioxide (a dilution ratio 1:7.5). Allow Pure 3000 to dry on floor.

A shoe or boot bath of 1000 ppm chlorine dioxide (1 gallon Pure 3000 per 3 gallons water)(1:3 ratio) is placed at all entrance to the incubator room.

Humidifier water is treated with 20 ppm chlorine dioxide (a dilution ratio of 1:150) or air filters can be sprayed with 100 ppm chlorine dioxide (a dilution ratio of 1:30) to reduce airborne bacterial contamination.

Each time eggs are removed from the incubator, use a glove dip at 50 ppm chlorine dioxide (a dilution ratio of 1:60) followed by a spray of 100 ppm chlorine dioxide (a dilution ratio of 1:30) on eggs from a spray bottle.

Where containers are used to discard bad eggs, use a 1000 ppm solution of chlorine dioxide (a dilution ratio of 1:3) to control odors and bacterial contamination.

The diluted Pure 3000 may be irritating if inhaled. For spraying operations, user must wear a half-face respirator with acid gas cartridge and N95 filter.

The doors to the incubator room should be kept closed as much as possible to avoid airborne contamination.

#### \*TREATMENT OF TRAY WASHING ROOM AND LOADING PLATFORM

Close all doors in the tray washing room to avoid contamination of other hatchery operations. Discard all chick downs, egg shells, and cast-off chicks into the trash barrels and transfer the covered containers to the loading platform for disposal.

Wash the trays, carriages and other working equipment in a tray washing machine with 300-500 psi water to remove gross filth and soil.

As a final rinse in the tray washing machine, use a solution containing 20 ppm chlorine dioxide (1 oz. Pure 3000 per 127 oz. water) in high pressure water. Allow the trays, carriers and other working equipment to air dry. The walls, floors and carrying stands must also be treated with the same solution. Allow the equipment to air dry. Hold the treated equipment in a closed area for reuse.

Entrance and exit from the tray washing room must be through a foot rinse containing a 1,000 ppm solution of chlorine dioxide (1 gallon Pure 3000 per 3 gallons water). The rinse must be at least ½ inch deep and should be changed daily. More often if traffic is heavy.

After use, the tray washing room is washed with high pressure water to remove gross filth and soil. Spray the entire area with a 1000 ppm solution of chlorine dioxide (a dilution ratio of 1:3) for 15 minutes and allow to air dry. This treatment is repeated after each use of the tray wash room.

The loading platform is washed to remove gross filth and soil. The trash containers are washed after discarding the contents to remove gross filth and soil and then sprayed with a 1000 ppm solution of chlorine dioxide (a dilution ratio of 1:3) and stored.

The diluted Pure 3000 may be irritating if inhaled. For spraying operations, user must wear a half-face respirator with acid gas cartridge and N95 filter.

#### \*TREATMENT OF CHICK ROOM, CHICK GRADING BOX AND SEXING BOX

- 1) Remove all poultry and feeds from premises, trucks, coops and crates.

- 2) Remove all litter and droppings from floors, walls and surfaces of facilities occupied or traversed by poultry.
  - 3) Empty all troughs, racks and other feeding and watering appliances.
  - 4) Thoroughly clean all surfaces with soap or detergent and rinse with water.
  - 5) Spray hard, non-porous surfaces within the entire area for 5 minutes with a dose of 1000 ppm chlorine dioxide (1 gallon Pure 3000 per 3 gallons water). Allow a 10 minute contact time.
  - 6) After treatment, ventilate buildings, coops or other enclosed spaces. Do not house poultry or employ equipment until treatment has been absorbed, set or dried.
  - 7) Thoroughly scrub treated feed racks, troughs, automatic feeders, fountains and waterers with soap or detergent and rinse with potable water before reuse.
  - 8) All workers in this area should use a hand dip or rinse containing 50 ppm chlorine dioxide (1 gallon Pure 3000 per 60 gallons water).
  - 9) Use a spray bottle containing a solution of 1 gallon Pure 3000 per 3 gallons water (1000 ppm chlorine dioxide) on hands, wire mesh and in empty chick boxes to control contamination and odors from litter.
  - 10) Clean floor by mopping daily with a solution of 400 ppm (400 mg/liter) chlorine dioxide (a dilution ratio 1:7.5). Allow Pure 3000 to air dry on floor.
  - 11) The diluted pure 3000 may be irritating if inhaled. For spraying operations, user must wear a half-face respirator with acid gas cartridge and N95 filter.
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## **Horticultural Premises and Equipment**

### **DISINFECTION, ALGAECIDE AND FUNGICIDE FOR HORTICULTURAL AND GREENHOUSE APPLICATIONS**

For horticultural applications, this product may be used to disinfect (250 ppm for 10 minutes-a dilution ratio of 1:12) to treat, control and prevent funguses, bacteria, and algae, slimes, rusts, leaf spot and mildews; and to remove slimes (50 ppm for 12 hours continuous treatment-dilution ratio of 1:60) and inhibit reemergence (0.25 ppm continuous treatment-dilution rate of 12000:1) in irrigation and other non-potable water systems.

#### **\*TREATMENT OF HORTICULTURE WORK AREA AND BENCHES**

Remove all gross filth and soil and thoroughly clean all surfaces with soap or detergent and rinse with clean water. Add Pure 3000 to water to make the chlorine dioxide 250 ppm (dilution ratio of 1:12). Using a commercial sprayer, saturate all surfaces with the diluted Pure 3000. Allow surfaces to remain wet for at least 10 minutes. The diluted Pure 3000 may be irritating if inhaled. For spraying operations, user must wear a half-face respirator with acid gas cartridge and N95 filter.

#### **\*TREATMENT OF HORTICULTURE POTS AND FLATS**

Remove all gross filth and soil and thoroughly clean all surfaces with soap or detergent and rinse with clean water. Add Pure 3000 to water to make the chlorine dioxide 500 ppm (dilution ratio of 1:6). Using a commercial sprayer, saturate all surfaces with the diluted Pure 3000. Allow surfaces to remain wet for at least 10 minutes. The diluted Pure 3000 may be irritating if inhaled. For spraying operations, user must wear a half-face respirator with acid gas cartridge and N95 filter.



#### \*TREATMENT OF HORTICULTURE CUTTING TOOLS

Remove all gross filth and soil and thoroughly clean all surfaces with soap or detergent and rinse with clean water. Add Pure 3000 to water to make the chlorine dioxide 250 ppm (dilution ratio of 1:12). Immerse tools in diluted Pure 3000 or spray to saturate all surfaces. Allow surfaces to remain wet for at least 10 minutes. The diluted Pure 3000 may be irritating if inhaled. For spraying operations, user must wear a half-face respirator with acid gas cartridge and N95 filter.

#### \*TREATMENT OF HORTICULTURE BULBS

Add Pure 3000 to water to make the chlorine dioxide 250-500 ppm (dilution ratio of 1:12-1:6). Immerse bulbs in diluted Pure 3000 or spray to lightly dampen all bulbs. Allow surfaces to remain wet for at least 10 minutes. The diluted Pure 3000 may be irritating if inhaled. For spraying operations, user must wear a half-face respirator with acid gas cartridge and N95 filter.

#### \*TREATMENT OF GREENHOUSE GLASS, WALKWAYS AND UNDER BENCH AREAS

Remove all gross filth and soil and thoroughly clean all surfaces with water. Add Pure 3000 to water to make the chlorine dioxide 125-250 ppm (dilution ratio of 1:24-1:12). Using a commercial sprayer, saturate all surfaces with the diluted Pure 3000. Allow surfaces to remain wet for at least 10 minutes. The diluted Pure 3000 may be irritating if inhaled. For spraying operations, user must wear a half-face respirator with acid gas cartridge and N95 filter.

#### \*TREATMENT OF EVAPORATIVE COOLERS

Remove gross filth or soil with a water wash. Spray the area with 125-250 ppm chlorine dioxide (dilution ratio of 1:24-1:12) for 5 minutes. Wet all surfaces and allow to dry. The floors should be mopped with a solution containing 400 ppm (400 mg/liter) chlorine dioxide (a dilution ratio 1:7.5). Allow Pure 3000 to air dry on floor.

#### TREATMENT OF RETENTION BASINS AND PONDS

Add Pure 3000 to the water at a dose of 2-5 ppm (2-5 mg/liter) chlorine dioxide (a dilution ratio 1:1500-1:600), and circulate or let stand overnight. Drain and rinse with clean water before re-use. To prevent slime growth after initial treatment, add Pure 3000 to the water at a dose of 5.0 ppm (5.0 mg/liter) chlorine dioxide (a dilution ratio of 1:600). Do not use where fish are present.

#### TREATMENT OF DECORATIVE POOLS, FOUNTAINS AND WATER DISPLAYS

Add Pure 3000 to the water at a dose of 5-10 ppm (5-10 mg/liter) chlorine dioxide (a dilution ratio 1:600-1:300), and circulate or let stand overnight. Drain and rinse with clean water before re-use. To prevent slime growth after initial treatment, add Pure 3000 to the water supply at a dose of 5.0 ppm (5.0 mg/liter) chlorine dioxide (a dilution ratio of 1:600). Do not use where fish are present.

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## **Commercial, Institutional and Industrial Premises and Equipment**

### **GENERAL DISINFECTANT**

This product may be used to disinfect (100 ppm for 10 minutes-a dilution ratio of 1:30) to treat, control and prevent funguses, bacteria, and algae, slimes, and mildews; and to remove slimes (50 ppm for 12 hours continuous treatment-dilution ratio of 1:60) in non-potable water systems.

### **\*DEODORIZATION OF ANIMAL HOLDING ROOMS, SICK ROOMS, MORGUES AND WORK ROOMS**

Thoroughly clean all surfaces before treatment. Add Pure 3000 to water to make the chlorine dioxide 1000 ppm (dilution ratio of 1:3). Spray the diluted Pure 3000 using a suitable spraying device onto walls, ceilings and floors, lightly dampening all surfaces. The diluted Pure 3000 may be irritating if inhaled. For spraying operations, user must wear a half-face respirator with acid gas cartridge and N95 filter. Allow surfaces to air dry and then ventilate the area. Treat as required.

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## **Food Processing Plants, Food-Handling Establishments and Restaurants**

### **ICE MAKING PLANTS AND MACHINERY**

Ice making machinery should be disassembled and thoroughly cleaned using a suitable detergent followed by a potable water rinse. Add Pure 3000 to the incoming water line of the ice machine via a chemical feed pump or injector system at a dose of 20 ppm chlorine dioxide (dilution ratio of 1:150).

### **CANNING RETORT AND PASTEURIZER COOLING WATER**

All tanks, tunnels, conveyer chains, heat exchangers, heat exchange towers, lines, spray bars and nozzles should be thoroughly cleaned, when possible, and completely rinsed using clean, potable water prior to treatment. Add Pure 3000 to water systems, including the cooling or warming tanks or spray systems, towers, lines and all water containing parts of the system dose at start up, 5 ppm chlorine dioxide (dilution ratio of 1:600). To maintain the 5 ppm chlorine dioxide concentration in the water system, a timed or electronically controlled chemical feed pump or injector system can be used for additions to the system or for treating the make-up water. Fresh Pure 3000 should be used daily.

### **STAINLESS STEEL TRANSFER LINES, HYDROCOOLERS AND PASTEURIZERS**

Clean equipment or line thoroughly using a suitable detergent followed by a clean, potable water rinse before treatment. Add Pure 3000 to potable make up water at a dose of 20 ppm chlorine dioxide (dilution ratio of 1:150) for each ten gallons of volume in lines and/or equipment. Mix and fill lines and equipment overnight. Drain and allow to air dry just prior to next run start-up.

## PROCESS WATER FOR VEGETABLE RINSES, TANKS AND LINES

All tanks, flumes and lines must be thoroughly cleaned with a suitable detergent and completely rinsed using clean, potable water prior to treatment. Chill tanks or vegetable rinse tanks may be batch loaded at start-up with a dose of 5 ppm chlorine dioxide (dilution ratio of 1:600 or 1 gallon Pure 3000 per 600 gallons water) for use on raw agricultural commodities. Make-up waters should be treated using a chemical feed pump or injector system and applied at the same rate per 25 gallons of potable water. Fresh Pure 3000 should be used daily.

For fruit and vegetables that will be processed (i.e. chopped, sliced, peeled, cooked, canned, pasteurized, homogenized, froze, etc.) the maximum residual chlorine dioxide concentration is 3.0 ppm (dilution ratio of 1:1000).

*Note: Chemical feed pumps and injectors must be chlorine resistant for best operation. Available chlorine dioxide levels should be confirmed using an approved chlorine dioxide test kit.*

### \*TREATMENT TO EXTEND FRESHNESS AND SHELF LIFE OF UNCUT AND UNPEELED FRUITS AND VEGETABLES

- 1) Before treatment, whole fruits and vegetables should be washed and thoroughly rinsed with clean, potable water.
- 2) Add Pure 3000 to water in an immersion tank or sink at a dose of 5 ppm (5.0 mg/liter) chlorine dioxide (a dilution ratio 1:600).
- 3) Immerse the previous cleaned fruit and vegetables and allow them to soak for at least 1 minute.

### FOR USE AS A LUBE ADDITIVE TO CONTROL BACTERIAL SLIME AND ODOR ON MOVING CONVEYORS AND CHAINS IN FOOD PROCESSING FACILITIES

- 1) Prior to beginning application of Pure 3000 to the diluted lube mixture, all conveyors, lube lines, spray nozzle heads, conveyor surfaces, and other associated structures should be thoroughly cleaned and sanitized.
- 2) Pure 3000 should be added to the water dilution step of the lube system just prior to its injection into the distribution system. Addition of Pure 3000 into the lube/water mixture should at a dose of 10-20 ppm (10-20 mg/L) a dilution ratio of 1:300 to 1:150.
- 3) For best results use with natural (fatty acid, soap based) lubricant products. For advice on lube compatibility contact your distributor.

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## Human Water Systems

### TREATMENT OF POTABLE WATER FOR HUMAN CONSUMPTION

For most municipal and other potable water systems, add Pure 3000 to the water at a dose of up to 2.0 ppm (2.0 mg/L) chlorine dioxide (a dilution ratio 1:1500). **Under US EPA regulations, drinking water intended for human consumption may not contain more than 0.8 ppm (0.8 mg/liter) residual chlorine dioxide no more than 1.0 ppm (1.0 mg/liter) chlorite ion.**

## WATER STORAGE SYSTEMS ABOARD AIRCRAFT BOATS, RV'S AND OFF-SHORE OIL RIGS

Add Pure 3000 to the water at a dose of up to 2.0 ppm (2.0 mg/L) chlorine dioxide (a dilution ratio 1:1500). **Under US EPA regulations, drinking water intended for human consumption may not contain more than 0.8 ppm (0.8 mg/liter) residual chlorine dioxide no more than 1.0 ppm (1.0 mg/liter) chlorite ion.**

## MUNICIPAL WELL WATERS

For most municipal water systems, add Pure 3000 to the water at a dose of up to 1.0 ppm (1.0 mg/L) chlorine dioxide (a dilution ratio 1:3000). **Under US EPA regulations, drinking water intended for human consumption may not contain more than 0.8 ppm (0.8 mg/liter) residual chlorine dioxide no more than 1.0 ppm (1.0 mg/liter) chlorite ion.**

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## Industrial Processes and water Systems

### TREATMENT OF COOLING WATER SYSTEMS, PROCESS WATER SYSTEMS, FLUME WATERS AND COOLING TOWERS TO CONTROL SLIME

Add Pure 3000 to the water at a dose of 50 ppm (50 mg/liter) chlorine dioxide (a dilution ratio 1:60), and circulate or let stand overnight. Drain and rinse with clean water before re-use. To prevent slime growth after initial treatment, add Pure 3000 to the water at a dose of 2.0 to 5.0 ppm (2.0 to 5.0 mg/liter) chlorine dioxide (a dilution ratio of 1:1500 to 1:600). 2-5 ppm dose may be fed intermittently or continuously.

### REVERSE OSMOSIS, \*NANOFILTRATION, AND \*ULTRAFILTRATION MEMBRANES TO CONTROL SLIME-FORMING ALGAE

Using typical oxidizing agents on these membranes can cause irreparable damage due to the presence of free chlorine. However, testing has shown total chlorine content of Pure 3000 is less than 10 ppm, thus it is possible to use diluted Pure 3000 upstream of the membrane without damaging the membrane. Depending on the quality of the water, continuous dosage rates between 0.1 ppm and 0.5 ppm of Pure 3000 will be sufficient to prevent biofilm fouling of the membrane. A dosage rate above 0.5 ppm may adversely affect the membrane due to the oxidation strength of Pure 3000. The variation depends on the feed water composition and the amount of organic material present in the feed water. The appropriate dosage rate must be determined by laboratory testing. **Caution:** the dosage rate of Pure 3000 should never exceed a level of 0.5 ppm and should always be a minimum of 0.1 ppm. While using Pure 3000 there will be no increase in the amount of salts passing through an RO membrane. This is a valid indicator that the membrane is not damaged. An automatic sensor should be used to regulate the Pure 3000 level in the system. Either a chlorine dioxide sensor or potentiostatic analyzer with the ability to measure in the level of sub-part per million should be used. To avoid damage to the membrane, the dosing system to inject Pure 3000 into the feed water should be controlled by the monitoring sensor and should automatically stop dosing if levels exceed the maximum levels. Appropriate testing by the customer is recommended. Pure 3000 can be used in the permeate for normal disinfection control and replace existing disinfectants (e.g. chlorine). Follow label directions for either potable or non-potable water.

Care should be used when using Pure 3000 on cellulose-based membranes. Be sure to always use a very dilute solution. Never use undiluted Pure 3000 solution. Pure 3000 should never be used with Ion Exchange resin or EDI membrane systems. This product is not for kidney dialysis equipment.

**NOTE:** Do not add Pure 3000 in the presence of sodium bisulfite or any other reducing agent which may be added to the feedwater to avoid neutralization of the active ingredient.

#### FOR MICROBIAL CONTROL IN SWEETWATER COOLING SYSTEMS

Pure 3000 may be batch loaded or metered into sweetwater cooling systems at the rate of 3.0 ppm (3.0 mg/L), a dilution ratio of 1:1000. Concentrations should be monitored to maintain the 3 ppm dose.

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#### Residential and Public Areas

\*DEODORIZER FOR RESTROOMS/BATHROOMS, REFUSE CONTAINERS, DIAPER PAILS, STORAGE LOCKERS

Thoroughly clean all surfaces before treatment. Add Pure 3000 to water to make the chlorine dioxide 50 ppm (dilution ratio of 1:60). Spray the diluted Pure 3000 using a suitable spraying device onto walls, ceilings, floors, and surfaces, until lightly damp. The diluted Pure 3000 may be irritating if inhaled. For spraying operations, user must wear a half-face respirator with acid gas cartridge and N95 filter. Allow surfaces to air dry and then ventilate the area. Treat as required.

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#### Ventilation Systems

##### TREATMENT OF VENTILATION SYSTEMS

To treat non-porous hard surfaces for odor causing bacteria associated with ventilation and air conditioning duct work in residential and commercial settings. Prior to inspecting, cleaning, treating or working on a ventilation system or its components, the system must be turned off or disconnected from any part of the system not isolated.

Mechanically clean, vacuum, or blow free of dirt, dust, mold and debris all duct work using a commercial duct cleaning system or service prior to treatment. The air ducts to be treated must be mechanically sound and free of air leaks.

Add Pure 3000 to the water at a dose of 500 ppm chlorine dioxide (a dilution ratio 1:6). Prepare in a well-ventilated area. Spray on surfaces, keep wet for 10 minutes, and allow to air dry. The diluted Pure 3000 may be irritating if inhaled. For spraying operations, user must wear a half-face respirator with acid gas cartridge and N95 filter.

## TREATMENT OF INDUSTRIAL AIR WASHERS, HUMIDIFIERS, AND EVAPORATIVE COOLERS

Pure 3000 should be added to the air washer sump with the use of a metering pump. Pure 3000 can be added on a continuous basis or intermittently as necessary to maintain control. For the control of bacteria and fungi in industrial air washer systems add at a rate of 1-5 ppm (1-5 mg/L), a dilution ratio of 1:3000 to 1:600.

NOTE: For use only in industrial air washer systems that maintain effective mist eliminating components.

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### **\*Prevention of Corrosion and Slime Causing Bacteria in Oil and Gas Wells During Secondary Recovery Operations**

Prepare a 500 ppm stock solution of available chlorine dioxide by diluting each gallon of this product used to 5 gallons of solution with the injection water.

Proportion 1 part of the above working solution into 150 parts of reinjected acidified (3.0-4.0 pH) water. Add Pure 3000 at a rate of 2 ppm chlorine dioxide per 1 ppm H<sub>2</sub>S.

Monitor microbial content of the water and increase or decrease the addition rate of the working solution as necessary.

### **\*ENHANCED OIL RECOVERY SYSTEMS**

When used as directed Pure 3000 effectively controls slime-forming and sulfate-reducing bacteria in injection and produced water systems, water disposal systems, and other oilfield water systems. Treat water at critical points in the system such as water or oil storage tanks, surge tanks, oil-water separators, before or after injection pumps, and injection well headers.

### **HYDRO-TESTING**

Water used to hydro-test pipelines or vessels should contain 100-1000 ppm of Pure 3000, depending on water quality and length of time the equipment will remain idle.

### **\*PIPELINE PIGGING AND SCRAPING OPERATIONS**

Add Pure 3000 to a slug of water immediately following the scraper (ideally this water volume can be kept to a minimum and contained between the scraper and a trailing pig). Sufficient product should be added to produce a concentration of 100-1000 ppm of Pure 3000 in the water at the discharge point or pig trap depending on the length of the pipeline and the severity of biofouling.

### **\*DRILLING, PACKER, COMPLETION, WORK OVER AND FRACTURING FLUIDS**

Pure 3000 should be added to these fluids at a point where uniform mixing will occur. Add 100-1000 ppm of Pure 3000 to a freshly prepared fluid depending on the severity of contamination.

## WARRANTY

**T.A. Comb, LLC** warrants that this product complies with the specifications expressed on the label. To the extent consistent with applicable law, **T.A. Comb, LLC** makes no other warranties, and disclaims all other warranties, express or implied, including but not limited to warranties of merchantability and fitness for the intended purpose.



Pure3000 is tested and certified by WQA according to NSF/ANSI 60