1412-2

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

SEPA United States Environmental Protection Office of Pesticide Programs

DEC - 3 2009

Olivia Laird Laird's Regulatory Consultants, Inc. Estates at Shenstone Farm 17804 Braemar Place Leesburg, VA 20175

FILE COPY

Subject: GO₂ International GO₂ EPA Registration No. 84912-2 Application Dated: November 30, 2009 Receipt Dated: December 2, 2009

Dear Ms. Laird:

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

A stamped copy of the accepted labeling 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 contact me at (703) 308-6345.

Sincerely,

Wanda Y. Henson Acting Product Manager - Team 32 Regulatory Management Branch II Antimicrobials Division (7510P)



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	ACCEPTED			
	DEC – 9 2009			
Under the Federal Insecticide, Fungicide, and Rodenticide, Act as amended, for the cesticide, registered under EPA Reg. No. 24912-2				

GO2[™] COMPONENT "A"

Only to be used with GO₂™ COMPONENT "B" for production of GO₂™ Chlorine Dioxide Concentrate 4,000 ppm Solution. Component A is sold and packaged together with Component B. Not sold separately. Concentrate shelf life of 30 days.

DISINFECTANT/SANITIZER/ FUNGICIDE/ALGAECIDE/SLIMICIDE/DEODORIZER

When used as directed, this chlorine dioxide-generating product is proven effective against Pseudomonas aeruginosa (ATCC 15442), Staphylococcus aureus (ATCC 6538), Salmonella enterica (ATCC 10708), methicillin-resistant S. aureus, "MRSA" (ATCC 33591), vancomycin-resistant Enterococcus faecalis, "VRE" (ATCC 51299), Klebsiella pneumonia (ATCC 4352)

FOR COMMERCIAL / INDUSTRIAL USE

KEEP OUT OF REACH OF CHILDREN DANGER PELIGRO

	FIRST AID
Remove contact le	e open and rinse slowly and gently with water for 15-20 minutes. nses, if present, after the first 5 minutes, then continue rinsing eye. Call a er or doctor for treatment advice.
	ning: Take off contaminated clothing. Rinse skin immediately with plenty minutes. Call a poison control center or doctor for treatment advice.
person sip a glass	poison control center or doctor immediately for treatment advice. Have of water if able to swallow. Do not induce vomiting unless told to do so rol center or doctor. Do not give anything by mouth to an unconscious
then give artificial r	e victim to fresh air. If person is not breathing, call 911 or an ambulance, espiration, preferably mouth-to-mouth if possible. Call a poison control reatment advice. Get medical attention.
	ontainer or label with you when calling the poison control center or treatment. You may also contact 1-800-424-9300 for emergency

EPA REG.No. 84912-2

Batch No.

EPA EST. No. 11399-CA-001

Manufactured for:



2625 Townsgate Road, Suite 330, Westlake Village, CA 91361

PRECAUTIONARY STATEMENTS

DANGER - HAZARDS TO HUMANS & DOMESTIC ANIMALS: Dry ingredients: Corrosive. Causes irreversible eye damage and causes skin burns. Do not get in eyes or on clothing. May be fatal if swallowed. Wear chemical resistant gloves. Wear protective eyewear (goggles, face shield or safety glasses) when handling dry ingredients. Wear coveralls worn over long-sleeved shirt and long pants. Chemical-resistant footwear and socks must be worn. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove contaminated clothing. Avoid contact with skin. Avoid breathing vapors. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. People must vacate the premises during fogging treatments; a one-hour restricted entry interval (REI) is required.

ENVIRONMENTAL HAZARDS This product is toxic to fish, aquatic invertebrates, oysters, and shrimp. 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.

<u>PHYSICAL OR CHEMICAL HAZARDS</u> Dry sodium chlorite is incompatible with acids, reducing agents, combustible materials, sulfur-containing rubber, solvents and paints. Keep GO_2^{TM} solution from light and heat. Chlorine dioxide gas may concentrate in open space of container after both powders have been added to the starting water. Always dilute activated product in a well-ventilated area.

NOTE: For use in the institutional or commercial applications discussed below. Not for residential use or where young children may be present.

DIRECTIONS FOR USE: IT IS A VIOLATION OF FEDERAL LAW TO USE THIS PRODUCT IN A MANNER INCONSISTENT WITH THE LABELING. Creates a 0.4% oxidizing agent. Do not mix component powders together in dry form. Mix component powders only into water. Do not mix with vinegar, hydrochloric, nitric or acetic acid or cleaning agents. Wear a NIOSH/MHSA-approved respirator appropriate for chlorine dioxide. When mixing and loading wear a chemical-resistant apron and chemical-resistant gloves.

1. Always read the material safety data sheet (MSDS) and follow this label's safety instructions.

2. Write down the date of preparation of the 4,000 ppm concentrate stock solution on the label of the container. The container must be UV-proof, sealable, dark and resistant to oxidation.

3. Fill the container with the exact amount of tap water shown on the label (1L, 5L, 10L, etc).

NEVER USE LESS THAN THE AMOUNT OF WATER SHOWN ON THE LABEL OR EXCESS GAS PRESSURE COULD RESULT AND THE CONTAINER COULD BURST.

4. First add COMPONENT A to the container with water.

NEVER ADD THE POWDER TO AN EMPTY CONTAINER. ALWAYS ADD IT TO WATER.

5. Follow by pouring COMPONENT B into the container.

6. Gently swirl the liquid and securely close the container.

7 Wait according to timetable below. Before use, verify concentration using chlorine dioxide test strips or a chlorine dioxide meter. If reading indicates lower than 4,000 ppm after reaction time has completed, refer to Product Use Guide for application solution concentration adjustment. 4,000 ppm is based on tap water at our production facility. Your results may vary with local water conditions.

8. GO₂™ 4,000 ppm Concentrate is ready for use.

9. GO₂™ Concentrate has a shelf life of approximately 30 days.

10. Store in a cool and dark place.

REACTION TIME	WATER TEMPERATURE
≥ 30 MIN	25°C (77°F)
≥ 3 HRS	20°C (68°F)
≥6 HRS	15°C (59°F)

WARRANTY STATEMENT: The Company warrants the product to be free from defects in material and workmanship. THE COMPANY MAKES NO WARRANTY THAT THE GOODS SHALL BE MERCHANTABLE. THE COMPANY MAKES NO WARRANTY, EXPRESSED OR IMPLIED, EXCEPT SUCH AS IS EXPRESSLY SET FORTH HEREIN. The Company shall not be liable for any incidental or consequential damages for any breach of warranty. The Company's liability for any breach of warranty shall be limited to the purchase price of the product.

When used as directed, this product is an effective sanitizer, disinfectant, and general-purpose antimicrobial. For all applications, clean surfaces before using product. Apply by mop, sponge, fogger or sprayer, ensuring visible wetness for times specified for these applications, or apply through immersion or clean-in-place application. Wear MSHA/NIOSH approved respirator with an organic-vapor removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G), or a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any R, P or HE prefilter." For overhead exposure wear chemical-resistant headgear.

SANITIZER FOR HARD, NON-POROUS, FOOD-CONTACT SURFACES: Effective food contact surface sanitizer at 15 ppm with an exposure time of 5 minute. Product may be used on previously cleaned food preparation surfaces; fountain drink and beverage dispensers; glassware, plates and eating utensils; food processing equipment, including beer processing equipment and lines, and food conveyor belts. Make up GO_2^{TM} using Components A and B per container label instructions to produce a 4,000 ppm Concentrate. Use a dilution device or sprayer to achieve a solution of 15 ppm. If diluting by hand, to create a 15 ppm solution, use 1 part GO_2^{TM} and dilute to 300 parts water.

DISINFECTANT FOR HARD, NON-POROUS SURFACES: Product may be used at 150 ppm with an exposure time of 10 minutes to disinfect hard surfaces in hotels, offices, ships, hospitals, schools, factories, nurseries, sick rooms, laundry rooms, eating establishments, medical, veterinary clinics or any other location that may be contaminated. Make up GO_2^{TM} per label instructions to produce a 4,000 ppm Concentrate. Dilute as necessary to produce a 150 ppm working solution. To create a 150 ppm solution, use 1 part GO_2^{TM} and dilute to 30 parts water.

DISINFECTANT FOR CLEAN-IN-PLACE APPLICATIONS FOR POTABLE WATER SYSTEMS: Product may be used to disinfect lines used in fountain drink or other beverage preparation, storage, transfer and dispensing. Add Component A to container of tap water, followed with Component B. Let stand based on room temperature (see Dilution Chart). This creates a 4,000 ppm Concentrate of GO_2^{TM} , use a dilution device with a 1:40 dilution (one part Concentrate diluted to 30 parts water) to achieve a 100 ppm solution (10-minute exposure time).

ANTIMICROBIAL AND GENERAL CLEANING APPLICATIONS FOR POTABLE WATER SYSTEMS: This product will reduce microbial populations in the potable water holding tanks and lines; and fountain drink or other beverage preparation, storage, transfer and dispensing lines and equipment. In addition, it will clean, eliminate odors, and remove organic matter. These uses must be followed by a potable water rinse. For 50 ppm, dilute the GO_2^{TM} Concentrate of 4,000 ppm 1:80 (dilute 1 part GO_2^{TM} to 80 parts water) using an appropriate dilution device.

ANTIMICROBIAL APPLICATIONS FOR NON-POTABLE WATER SYSTEMS IN HORTICULTURAL <u>SETTINGS</u>: This product may be used to reduce microbial populations in non-potable water used with cut flowers to minimize microbial transfer from water to flower, thereby maintaining freshness and extending shelf-life of cut flowers. Beginning with a 4,000 ppm Concentrate of GO_2^{TM} , use a dilution device with a 1:800 dilution (one part Concentrate to 800 parts water) to achieve a 5 ppm solution.

<u>GENERAL DISINFECTANT, SANITIZER, ALGAECIDE AND FUNGICIDE FOR HORTICULTURAL AND</u> <u>GREENHOUSE APPLICATIONS</u>: For horticultural applications, this product may be used to disinfect (100 ppm/10 minutes or 50 ppm/20 minutes) and sanitize (20 ppm/5 minutes) hard, non-porous surfaces; to treat, control, and prevent (50 ppm/12 hours-overnight) & inhibit re-emergence (0.25 ppm/continuous treatment) in irrigation and other non-potable water systems. Beginning with a 4,000 ppm Concentrate of GO₂™, use a dilution device or sprayer: for 100 ppm, use a dilution device or sprayer with a 1:40 dilution (dilute one part GO₂™ to 40 parts water); for 50 ppm, use a 1:80 dilution (dilute 1 part GO₂™ to 80 parts water); for 20 ppm, use a 1:200 dilution (dilute 1 part GO₂™ to 200 parts water); for 5 ppm, use a 1:800 dilution (dilute 1part GO₂™ to 800 parts water); for 0.25 ppm, use a 1:16,000 dilution (dilute 1 part GO₂™ to 16,000 parts water).

FRUIT AND VEGETABLE WASH TO EXTEND FRESHNESS AND SHELF-LIFE: This product may be used at 5 ppm for 1 minute to reduce spoilage microorganisms on raw agricultural commodities ("RACs") in food processing facilities. Beginning with a 4,000 ppm solution of GO₂TM Concentrate, use a dilution

device or sprayer with a 00 dilution (dilute 1 part GO_2^{TM} to 800 parts (x, y)) to achieve a 5 ppm solution. Spray or dip RACs, and follow with a potable water rinse or by canning, blanching, or cooking.

DIRECTIONS FOR USE IN CONTROLLING MICROBIAL POPULATION IN POULTRY PROCESSING WATER: GO_2^{TM} may be used as an antimicrobial agent in water used in poultry processing, provided that the residual concentration of GO_2^{TM} does not exceed 3 ppm, as determined by an appropriate method in accordance with 21CFR§173.300. For treatment of poultry chill water, maintain a residual concentration of up to 3 ppm GO_2^{TM} in the chiller water.

FOOD PLANT PROCESS WATER TREATMENT: GO_2^{TM} is effective for use in controlling microbiological growth in flume water and other food processing water systems such as chill water systems and hydro-coolers. The required dosages will vary with process conditions and the degree of contamination present. Depending on the requirements of the specific water system, GO_2^{TM} should be applied through a dosing pump to achieve a chlorine dioxide residual concentration between 0.25 and 5.0 ppm. Water containing up to 3 ppm residual chlorine dioxide may be used for washing fruits and vegetables that are not raw agricultural commodities in accordance with 21CFR§173.300. Treatment of the fruits and vegetables with GO_2^{TM} must be followed by a potable water rinse, or by blanching, cooking or canning.

INDUSTRIAL COOLING WATER TREATMENT: For control of bacterial slime and algae in industrial recirculating and one-pass cooling systems, the required dosages will vary depending on the exact application and the degree of contamination present. The required GO_2^{TM} residual concentrations range between 0.1 and 5.0 ppm. GO_2^{TM} may be applied either continuously or intermittently. The typical GO_2^{TM} residual concentration range is 0.1 - 1.0 ppm for continuous doses, and 0.1 - 5.0 ppm for intermittent doses. The minimum acceptable residual concentration of GO_2^{TM} is 0.1 ppm for a minimum one minute contact time.

POTABLE WATER TREATMENT: GO2[™] is used as both an oxidant and a disinfectant in drinking water treatment. The required dosages will vary with source water conditions and the degree of contamination present. For most municipal and public potable water systems, a GO2[™] residual concentration of up to 2 ppm is sufficient to provide adequate disinfection. Residual disinfectant and disinfection byproducts must be monitored as required by the National Primary Drinking Water Regulations (40 CFR Part 141) and state drinking water standards.

BACTERIAL SLIME CONTROL IN PAPER MILLS: GO_2^{TM} is effective for use in controlling microbiological growth in white water paper mill systems. The required dosages will vary with the degree of microbiological and process contamination present. Depending on the specific requirements of the system, GO_2^{TM} must be applied continuously or intermittently through a dosing pump to achieve a GO_2^{TM} residual concentration between 0.1 and 5.0 ppm. Intermittent treatments should be repeated as often as necessary to maintain control.

<u>MOLLUSK CONTROL IN WATER SYSTEMS:</u> GO_2^{TM} may be used for mollusk control in commercial and industrial re-circulating and one-pass cooling water systems. The required dosages will vary with the system type, system conditions, and the degree of water contamination present and the desired level of control. Depending on the extent of the infestation, GO_2^{TM} can be applied as to maintain a residual concentration:

- Veliger Control: Maintain a continuous GO₂™ residual of 0.1 0.5 ppm.
- Intermittent Dose: Apply GO₂™ to obtain a residual concentration of 0.2 5 ppm. Repeat as necessary to maintain control.
- Continuous Dose: Maintain a GO2[™] residual concentration of up to 2 ppm.

BACTERIAL CONTROL IN OIL WELLS AND PETROLEUM SYSTEMS: GO_2^{TM} is effective in the remediation of bacterial and sulfide contamination commonly found in oilfield production, injection and disposal fluids. The required dosages will vary with process conditions. GO_2^{TM} may be applied either continuously or intermittently through a dosing pump to oil well production water as it is separated from the oil, and before it is re-injected into the well. For continuous feeds, GO_2^{TM} may be applied at dosages slightly higher than sulfide's oxidative demand as determined by a demand study. For intermittent treatment, GO_2^{TM} should be applied at a shock dosage of 200 - 3000 ppm.

WASTEWATER TREATMENT: GO_2^{TM} is effective as both a disinfectant and an oxidant in wastewater treatment. The required dosages will vary with water conditions and the degree of contamination present. For most municipal and other wastewater systems, a residual concentration of up to 5 ppm is sufficient to provide adequate disinfection. For sulfide odor control, between pH 5-9, a minimum of 5.2 ppm (wt) of GO_2^{TM} should be applied to oxidize 1 ppm of sulfide (measured as sulfide ion). For phenol destruction, at pH

Dilution Chart			
TO CREATE THIS CONCENTRATION	USE THIS DILUTION PROCEDURE		
0.10 PPM	1 part GO ₂ ™, dilute to 40,000 parts water		
0.25 PPM	1 part GO ₂ ™, dilute to 16,000 parts water		
0.50 PPM	1 part GO ₂ ™, dilute to 8,000 parts water		
1.0 PPM	1 part GO ₂ ™, dilute to 4,000 parts water		
1.5 PPM	1 part GO ₂ ™, dilute to 3,000 parts water		
2.0 PPM	1 part GO ₂ ™, dilute to 2,000 parts water		
2.5 PPM	1 part GO ₂ ™, dilute to 1,600 parts water		
3.0 PPM	1 part GO ₂ ™, dilute to 1,500 parts water		
5.0 PPM	1 part GO ₂ ™, dilute to 800 parts water		
10.0 PPM	1 part GO ₂ ™, dilute to 400 parts water		
15.0 PPM	1 part GO ₂ ™, dilute to 300 parts water		
20.0 PPM	1 part GO ₂ ™, dilute to 200 parts water		
25.0 PPM	1 part GO ₂ ™, dilute to 160 parts water		

STORAGE

DO NOT CONTAMINATE WATER, FOOD OR FEED BY STORAGE AND DISPOSAL. STORE IN COOL, DRY, VENTILATED AREA. STORE BELOW 50° C (122° F). DO NOT FREEZE. KEEP PRODUCT OUT OF DIRECT SUNLIGHT. STORE SEPARATELY FROM WATER AND ACIDS. IF THIS PRODUCT CANNOT BE USED ACCORDING TO LABEL INSTRUCTIONS, CONTACT YOUR STATE PESTICIDE OR ENVIRONMENTAL CONTROL AGENCY, OR THE HAZARDOUS WASTE REPRESENTATIVE AT THE NEAREST EPA REGIONAL OFFICE FOR GUIDANCE.

CONTAINER DISPOSAL

NON-REFILLABLE CONTAINER: Do not reuse or refill this container. Refer to the following Recycling Statements for proper disposal. Offer for recycling, if available.

RESIDUE REMOVAL: TRIPLE RINSE CONTAINER PROMPTLY AFTER EMPTYING. See below.

RECYCLING STATEMENTS:

For containers 50 lbs or less: Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 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 containers greater than 50 lbs: Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

EMERGENCY HANDLING DIRECTIONS:

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

ACCIDENTAL SPILL OR RELEASE PROCEDURES

Wear coveralls worn over long-sleeved shirt and long pants. Chemical-resistant footwear and socks must be worn. Recover product and place in an appropriate airtight container. Ventilate area of leak or spill. Keep unnecessary and unprotected people away from area of spill. Ventilate and clean the spill area with equipment. Avoid formation of dust. Rinse spill residue with soda solution and plenty of water.

PESTICIDE DISPOSAL DIRECTIONS:

Pesticide wastes are acutely hazardous, improper disposal of excess pesticide spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

- 1. Check expiration date on test strip container. If expired, then recheck using fresh test strip from a container that has not reached its expiration date. If expired, recheck using a fresh reagent packet.
- If the original test strip container (or reagent packet if using a meter) has not expired OR if the recheck with fresh test strip or chlorine dioxide meter with a fresh reagent packet indicates a lower-than-desired concentration, then do the following:
- 3. After dilutiing GO₂ Concentrate to the desired final Application Solution concentration, add small amounts of GO₂ Concentrate to the Application Solution about 10% of the volume of the Application Solution at a time until the test strip or chlorine dioxide meter indicates the desired concentration. Stir or mix the solution gently after each addition. Use a fresh test strip or fresh reagent packet if using a meter for each test.