88800-1 4/16/2011 1of8

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Antimicrobials Division (7510P)
1200 Pennsylvania Avenue NW
Washington, D.C. 20460

Ef.. Reg. Number:	Date of Issuance:
88800-1	APR 16 2011

Term of Issuance: Unconditional

Name of Pesticide Product: AO_2^{TM} Component "A"

NOTICE OF PESTICIDE:
x Registration
___ Reregistration

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

Applied Oxidation, LLC
2567 Crestwood Drive
Chattanooga, TN 37415

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product (OPP Decision No. D-459237) is unconditionally registered in accordance with FIFRA sec 3(c)(7)(A) provided that you:

1. Submit and/or cite all data required for registration of your product under FIFRA sec. 3(c)(5) when the Agency requires all registrants of similar products to submit such data; and submit acceptable responses required for re-registration of your product under FIFRA section 4.

2. Make the labeling changes listed below before you release the product for shipment:

a. Revise the "EPA Registration Symbol to read "EPA Reg. No. 88800-1".

b. Revise the "Commerical/Industrial Only" claim by deleting "only."

c. Revise the "Precautionary Statenent" heading to read "Precautionary *Statements*."

Signature of Approving Official:

Monisha Harris
Product Manager Team-32
Regulatory Management Branch
Antimicrobials Division (7510P)

Date: APR 16 2011

2 of 8

c. Relocate the "Personal Protective Equipment (PPE)" and "User Safety Requirements" sections to appear immediately after the "Precautionary Statements" on page 2.

d. Revise the "Directions" that begin with the phrase, "Product may be used" to read "Use product"… such that it is incompliance with Mandatory Labeling, PR Notice 2000-5.

e. Revise 3rd statement under the "Food Plant Process Water Treatment" directions on page 4 by deleting the term, should, and state "…, apply AO_2 through…."

f. Revise the last statement under the "Bacterial Slime Control in Paper Mills" directions on page 4 by deleting the term, should, and state "Repeat intermittent treatment as often…"

g. Revise the last statement under the "Bacterial Control in Oil Wells and Petroleum Systems" directions on page 4 by deleting the term, should, and state "For intermittent treatment, apply AO_2 at a shock dosage…."

h. Delete the second set of "Pesticide Storage and Pesticide Disposal" instructions on page 6 because it is redundant.

3. Submit three (3) copies of your final printed labeling before distributing or selling the product bearing the revised labeling.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records. Should you have any questions regarding this letter, please contact me by phone at (703) 308-0410 or by email at harris.monisha@epa.gov.

Sincerely,

Monisha Harris
Product Manager (32)
Regulatory Management Branch
Antimicrobials Division (7510P)

Enclosure: Stamped label
Chemistry Data Evaluation

Applied Oxidation

AO_2™ COMPONENT "A"

Only to be used with AO_2™ COMPONENT "B" for production of AO_2™ Chlorine Dioxide Concentrate 4000ppm 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 ONLY

FIRST AID	
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 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 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.
If Inhaled:	Remove victim to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for treatment advice. Get medical attention.
HOT LINE NUMBER Have the product container or label with you when calling the poison control center or doctor, or going for treatment. You may contact 1-800-424-9300 for emergency medical treatment information.	

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

Active Ingredient:	
Sodium Chlorite:	52 %
Other Ingredients:	48 %
Total:	100 %

DANGER PELIGRO

KEEP OUT OF REACH OF CHILDREN

EPA REG. No. 88800-1

EPA EST. No. 66397-OK-1

Manufactured by:
Applied Oxidation LLC
2567 Crestwood Drive
Chattanooga, TN 37415

Batch No. _____

ACCEPTED
APR 16 2011
Under the Federal Insecticide, Fungicide, and Rodenticide, Act as amended for the pesticide, registered under EPA Reg. No. 88800-1

PRECAUTIONARY STATENENT
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER: Corrosive: Dry ingredients: Causes irreversible eye damage. Causes skin burns. Do not get in eyes, on skin or clothing. May be fatal if swallowed. 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.

General Precautions and Restrictions

Premises must be vacated during fogging treatment. Do not re-enter the premises before one-hour after treatment.

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.

PHYSICAL OR CHEMICAL HAZARDS Dry sodium chlorite is incompatible with acids, reducing agents, combustible materials, sulfur-containing rubber, solvents and paints. Keep AO2 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.

Personal Protective Equipment (PPE)

Applicator and other handlers must wear the following:

- Chemical resistant gloves
- Long-sleave shirt
- Long pants
- Shoes plus socks

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

User Safety Requirements

User must:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately after handling if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- User must remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing.

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. AO2 ™ 4,000 ppm Concentrate is ready for use.
9. AO2 ™ Concentrate has a shelf life of approximately 30 days.
10. Store in a cool and dark place.

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

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 MSHAINIOSH 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 AO2 ™ 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 AO2 ™ 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 AO2 ™ 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 AO2 ™ 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 AO2 ™, 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 AO2 ™ Concentrate of 4,000 ppm 1:80 (dilute 1 part AO2™ to 80 parts water) using an appropriate dilution device.

ANTIMICROBIAL APPLICATIONS FOR NON-POTABLE WATER SYSTEMS IN HORTICULTURAL SETTINGS: 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 AO2 ™, use a dilution device with a 1:800 dilution (one part Concentrate to 800 parts water) to achieve a 5 ppm solution.

GENERAL DISINFECTANT, SANITIZER, ALGAECIDE AND FUNGICIDE FOR HORTICULTURAL AND GREENHOUSE APPLICATIONS: 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 AO2, use a dilution device or sprayer: for 100 ppm, use a dilution device or sprayer with a 1:40 dilution (dilute one part AO2 TM to 40 parts water); for 50 ppm, use a 1:80 dilution (dilute 1 part AO2 to 80 parts water); for 20 ppm, use a 1:200 dilution (dilute 1 part AO2 to 200 parts water); for 5 ppm, use a 1:800 dilution (dilute 1 part AO2™ to 800 parts water); for 0.25 ppm, use a 1:16,000 dilution (dilute 1 part AO2 TM 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 AO2 TM Concentrate, use a dilution device or sprayer with a 1:800 dilution (dilute 1 part AO2 TM to 800 parts 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: AO2™ may be used as an antimicrobial agent in water used in poultry processing, provided that the residual concentration of AO2 ™ does not exceed 3 ppm, as determined by an appropriate method in accordance with 21 CFR§173.300. For treatment of poultry chill water, maintain a residual concentration of up to 3 ppm AO2 ™ in the chiller water.

FOOD PLANT PROCESS WATER TREATMENT: AO2™ is effective for use in controlling microbiological growth in flume water and other food processing water systems such as chill water systems and hydrocoolers. The required dosages will vary with process conditions and the degree of contamination present. Depending on the requirements of the specific water system, AO2 ™ 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 AO2 ™ 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 AO2 ™ residual concentrations range between 0.1 and 5.0 ppm. AO2 ™ may be applied either continuously or intermittently. The typical AO2 ™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 AO2 ™ is 0.1 ppm for a minimum one minute contact time.

POTABLE WATER TREATMENT: AO2TM 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 AO2 TM 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: AO2 ™ 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, AO2 TM must be applied continuously or intermittently through a dosing pump to achieve a AO2 TM residual concentration between 0.1 and 5.0 ppm. Intermittent treatments should be repeated as often as necessary to maintain control.

MOLLUSK CONTROL IN WATER SYSTEMS: AO2TM 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, AO2 ™ can be applied as to maintain a residual concentration:

- Veliger Control: Maintain a continuous AO2 ™ residual of 0.1 - 0.5 ppm.
- Intermittent Dose: Apply AO2 ™ to obtain a residual concentration of 0.2 - 5 ppm. Repeat as necessary to maintain control.
- Continuous Dose: Maintain a AO2 TM residual concentration of up to 2 ppm.

BACTERIAL CONTROL IN OIL WELLS AND PETROLEUM SYSTEMS: AO2 ™ 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. AO2 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, AO2 TM may be applied at dosages slightly higher than sulfide's oxidative demand as determined by a demand study. For intermittent treatment, AO2™ should be applied at a shock dosage of 200 - 3000 ppm.

WASTEWATER TREATMENT: AO2™ 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 AO2 ™ should be applied to oxidize 1 ppm of sulfide (measured as sulfide ion). For phenol destruction, at pH less than 8,1.5 ppm chlorine dioxide will oxidize 1 ppm phenol; at pH greater than 10, 3.3 ppm AO2™ will oxidize 1 ppm phenol.

Dilution Chart

TO CREATE THIS CONCENTRATION	USE THIS DILUTION PROCEDURE
0.10 PPM	1 part AO2 TM, dilute to 40,000 parts water
0.25 PPM	1 part AO2 TM, dilute to 16,000 parts water
0.50 PPM	1 part AO2 TM, dilute to 8,000 parts water
1.0 PPM	1 part AO2 TM, dilute to 4,000 parts water
1.5 PPM	1 part AO2 TM, dilute to 3,000 parts water
2.0 PPM	1 part AO2 TM, dilute to 2,000 parts water
2.5 PPM	1 part AO2 TM, dilute to 1,600 parts water
3.0 PPM	1 part AO2 TM, dilute to 1,500 parts water
5.0 PPM	1 part AO2 TM, dilute to 800 parts water
10.0 PPM	1 part AO2 TM, dilute to 400 parts water
15.0 PPM	1 part AO2 TM, dilute to 300 parts water
20.0 PPM	1 part AO2 TM, dilute to 200parts water
25.0 PPM	1 part AO2 TM, dilute to 160 parts water

APPLICATION SOLUTION ADJUSTMENT: IF CHLORINE DIOXIDE TEST STRIP OR CHLORINE DIOXIDE METER INDICATE CONCENTRATION (PPM) OF AO2 CONCENTRATE LOWER THAN DESIRED:

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.
2. 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 diluting AO2 Concentrate to the desired final Application Solution concentration, add small amounts of AO2 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

STORAGE AND DISPOSAL

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

Pesticide Storage: Store in original, tightly-closed container in an area inaccessible to children or persons unfamiliar with its use and away from food or feed. Keep tightly closed until ready to use. Store in original, unopened containers at or below 25 C (77F). This product has a minimum shelf life of 12 months after date of shipment.

Pesticide Disposal: 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 the label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Pails, Drums and IBC's (containers greater than one gallon)
Pesticide Storage: Store in original, tightly-closed container in an area inaccessible to children or persons unfamiliar with its use and away from food or feed. Keep tightly closed until ready to use. Store in original, unopened containers at or below 25 C (77F). This product has a minimum shelf life of 12 months after date of shipment.

Pesticide Disposal: 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 the label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Containers Handling: NONREFILLABLE CONTAINER. 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."

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.