



# Anthium Dioxide®

5% AQUEOUS STABILIZED CHLORINE DIOXIDE



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DISINFECTANT

*Disinfect animal drinking water lines*

*To control taste and odor in the water supply system of poultry, swine, cattle and other livestock*

*Disinfectant*

**ACTIVE INGREDIENT:**

Chlorine Dioxide ..... 5.0%

**INERT INGREDIENTS** ..... 95.0%

**TOTAL INGREDIENTS** ..... 100.0%

KEEP OUT OF REACH OF CHILDREN

### CAUTION / AVISO

See side (back) panel for additional precautionary statements

**FIRST AID**

**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.

**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 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:** 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.

For 24 hour emergency information on this product, call Chemtrec at 1-800-424-9300 (US, Canada, Puerto Rico, Virgin Islands) 1-703-527-3887 (All Other Areas) Medical Emergency 1-800-441-3637 (outside U.S. 302-774-1000).

Hotline: You may also contact the National Poison Control Center at 1-800-222-1212 for Emergency Medical Advice. Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

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

**PRECAUTIONARY STATEMENTS**

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**CAUTION:** Causes moderate eye irritation. Harmful if swallowed or absorbed through the skin. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling.

**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.

**CHEMICAL AND PHYSICAL HAZARDS**

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

**STORAGE AND DISPOSAL**

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

**STORAGE:** Do not store with easily oxidizable materials, acids, reducers, and combustible material. Avoid heat or freezing conditions. Store upright and do not stack drums over two high on pallets or partially filled drums. Use of a drum pump is suggested. Keep drum tightly closed when not withdrawing liquid. In case of spills, dilute with large quantities of water. Do not allow liquid to dry because this could present a fire hazard. Store only in the original container and take care to prevent cross-contamination with other pesticides, fertilizers, food and feed.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product may be disposed of on-site or at an approved waste disposal facility.

**CONTAINER DISPOSAL:** Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on it's side and roll back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip back and forth several times. Turn the container over onto its other end and tip back and forth several times. Empty the rinsate into application equipment or mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**EMERGENCY HANDLING:** In case of contamination or decomposition, do not reseal container. Isolate in open, well-ventilated area. Flood with large volumes of water. Cool unopened drums in vicinity by water spray.

**NOTICE:** Seller expressly warrants that the product conforms to its chemical description. There are no warranties associated with the sale of the product either express or implied, including but not limited to the warranties of fitness for a particular purpose or use.

**To Disinfect Drinking Water Supply for Poultry, Swine, Cattle and Other Livestock**

Use Anthium Dioxide® with a chlorine dioxide generator to generate an aqueous chlorine dioxide solution. Alternatively, Anthium Dioxide® can be mixed manually to generate an aqueous chlorine dioxide solution. The chlorine dioxide generator and manual mixing methods react Anthium Dioxide® with either a chlorine solution and acid or an acid. The generated chlorine dioxide solution can be added at a point in the system which ensures uniform mixing and distribution of up to 5 ppm of chlorine dioxide.

Follow all instructions for the chlorine dioxide generator carefully. Always prepare and use chlorine dioxide solutions in a well-ventilated area. Treat water continuously from day one. Remove Anthium Dioxide® from drinking water 24 hours prior to vaccination, then resume treatment 24 hours after vaccinations.

*Note: This is not intended for use in human drinking water and treated water must not be made available for human consumption.*

**Manual Mixing Method A**

For a 5 ppm chlorine dioxide solution add 1 part Anthium Dioxide® to 10,000 parts water; approximately 1.0 fl. oz. Anthium Dioxide® per 80 gallons of water. Use more water for lower chlorine dioxide concentrations. Add 2-5 ppm sodium hypochlorite; 3 – 8 parts of 12.5% bleach to 10,000 parts water. Using an appropriate acid add sufficient acid to lower solution pH to 5.0 to 6.5. Allow 15 minutes before delivery to livestock water lines.

After 24 hours, the addition rate can be reduced to 1 ppm of available chlorine dioxide by adding 1.0 fl. oz. of Anthium Dioxide® to approximately 400 gallons of animal drinking water as long as terminal concentration at the end of the water line is not less than 0.5 ppm.

**Manual Mixing Method B**

Add 1 part Anthium Dioxide® to 9 parts water. Activate by adding phosphoric, hydrochloric, acetic or other food grade acid to a pH of 2.5-3.5. Mix and allow to stand for at least 15 minutes before delivery to livestock water lines. Then dilute 1 part of the activated solution with 1,000 to 5,000 parts water for a 1 to 5 ppm chlorine dioxide solution.



5 GALLONS (18.93L)

EPA REG. NO. 9150-2  
EPA EST. NO. 10183-MI-01

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The miracles of science

## USE INFORMATION

The efficacy of Anthium Dioxide® depends on the degree of activation. Unactivated Anthium Dioxide® effectively controls microbes in processing waters and mold and mildew. For disinfection, Anthium Dioxide® must be activated. Read the activation instructions carefully prior to using Anthium Dioxide®.

Anthium Dioxide® can be used to treat hard, non-porous surfaces and water systems in: dairy and poultry farms and production facilities, animal transport vehicles and equipment, animal confinement and rearing facilities, animal handling facilities, livestock facilities and hatcheries.

## DIRECTIONS FOR USE

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

### IN ANIMAL REARING & CONFINEMENT FACILITIES

To Disinfect Hard, Non-Porous Surfaces In Commercial Animal Confinement Facilities such as Poultry Houses, Swine Pens, Calf Barns and Kennels and for use in Laboratory Animal Breeding and Research Quarters for Controlling Cross-Contamination of Microorganisms Infectious to these Animals and Humans from Treated Surfaces

1. Remove all animals and feed from premises, vehicles, enclosures, coops and crates.
2. Remove all litter and manure from floors, walls and surfaces of barns, pens, stalls, chutes and other facilities and fixtures occupied or traversed by animals.
3. Empty all troughs, racks and other feeding and watering appliances.
4. Thoroughly clean all surfaces with soap and detergent and rinse with water.
5. Prepare an activated 300-400 ppm use-solution of Anthium Dioxide®: Add one ounce of Anthium Dioxide® to one gallon of water. Once the Anthium Dioxide® has been diluted, add 0.5 - 1.0 oz "DuPont™ AcidEdge™" per one gallon of solution. Prepare in a well-ventilated area and avoid breathing any fumes which may be produced during activation.
  - a. One ounce of Anthium Dioxide®
  - b. One gallon of water
  - c. To the solution of **Step b.** add 0.5 - 1oz. "DuPont™ AcidEdge™"

*Always add Anthium Dioxide® to water, followed by acidic cleaner.*

6. **Application:** Using a commercial sprayer, saturate all surfaces with the activated Anthium Dioxide® solution for a period of ten (10) minutes. Active solutions may be irritating if inhaled; therefore, always use an applicable NIOSH/MSHA approved respirator appropriate for chlorine dioxide when spraying these solutions. Immerse all halters, ropes and other types of equipment used in handling and restraining animals as well as forks, shovels and scrapers used for removing litter and manure.
7. After treatment, ventilate buildings, coops or other enclosed spaces and allow to air dry. Repopulate when solution has dried.
8. Thoroughly scrub treated feed racks, troughs, automatic feeders, fountains and waterers with soap or detergent and rinse with potable water before use.

Manufactured for:  
International Dioxide, Inc.  
40 Whitecap Drive  
North Kingstown, RI 02852

Questions? Call 1 800-441-7515  
(outside U.S. 302-774-1000)

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## ANIMAL REARING AND CONFINEMENT FACILITIES

### To Disinfect Waterlines and Associated Fixtures in Animal Confinement Facilities such as Poultry Houses, Swine Pens, Calf Barns and Kennels When Animals are not Present

1. Remove all animals from premises.
2. Drain waterlines and watering appliances.
3. Prepare an activated 300 ppm use-solution of Anthium Dioxide® by:
  - a) Injection Using Metering Equipment: Add Anthium Dioxide® at the rate of 1 part to 165 parts water. ***Once the Anthium Dioxide® has been diluted***, inject 0.5 – 1.0 oz. per gallon “DuPont™ AcidEdge™”.
  - b) Header Tank: Add 0.8 ounces of Anthium Dioxide® per gallon of water in a clean plastic header tank sufficient to refill water lines to deliver 300 ppm. Thoroughly mix solution, and then add 0.5 – 1.0 oz. per gallon “DuPont™ AcidEdge™”. Trigger each nipple drinker to ensure contact with solution.
4. Turn on water supply or open filling valve to fill entire drinking water supply. Allow solution to remain in water lines for 4-8 hours.
5. Drain waterlines and flush with clean water

## DRINKING WATER FOR POULTRY, SWINE, CATTLE, AND OTHER LIVESTOCK.

### To Control Taste and Odor in the Water Supply System

1. Prepare a solution with 5 ppm available chlorine dioxide by adding 1 part of Anthium Dioxide® per 10,000 parts of water (a 1:10,000 dilution) (1 fl. oz. Anthium Dioxide® to each 75 gallons). Allow 15 minutes before delivery to livestock or poultry.
2. If the water supply has heavy contamination prepare a solution of 11 ppm available chlorine dioxide by adding 1 part of Anthium Dioxide® per 4545 parts of water (a 1:4545 dilution) (1 fl. oz. Anthium Dioxide® to each 35.5 gallons). Allow 15 minutes before delivery to livestock or poultry.
3. After 24 hours, the addition rate can be reduced to 1 ppm of available chlorine dioxide by adding 1 gallon of Anthium Dioxide® to each 50,000 gallons of animal drinking water as long as terminal concentration at end of waterline is not less than 0.5 ppm.
4. Treat water continuously from day one. Remove Anthium Dioxide® from drinking water 24 hours prior to vaccination, then resume treatment 24 hours after vaccinations.

***Note: This product is not intended for use in human drinking water and treated water must not be made available for human consumption.***