

## PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**WARNING:** Causes substantial, but temporary eye damage and skin irritation. Do not get in eyes, on skin or on clothing. Wear protective eyewear (goggles or face shield), long-sleeved shirt and long pants, socks and resistant footwear and rubber gloves. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco or using the toilet. Remove contaminated clothing before reuse. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

### ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and aquatic organisms. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or public 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.

### STORAGE AND DISPOSAL

#### DO NOT CONTAMINATE WATER, FOOD OR FEED BY STORAGE OR DISPOSAL.

**PESTICIDE STORAGE:** Store in the original container in a dry, temperature controlled area. Do not store in a manner where cross contamination with other pesticides, fertilizers, food or feed could occur. If spilled during storage or handling, contain/re-capture spillage and dispose of in accordance with the Pesticide Disposal Instructions listed below.

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

**NON-REFILLABLE CONTAINER:** Non-refillable container. Do not reuse or refill this container.

**CONTAINER DISPOSAL:** Triple rinse (or equivalent) promptly after emptying, then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill or incineration if allowed by state and local authorities by burning. If burned stay out of smoke.

**ANTHIUM™ C-20** is a disinfectant, fungicide, virucide, bactericide, mildewcide and mildewstat. It also provides exceptional cleaning and deodorizing. ANTHIUM™ C-20 provides broad-spectrum efficiency and economy for commercial, institutional, industrial and agricultural disinfection.

**ANTHIUM™ C-20** ability to OXIDIZE MALODORS offers a definite plus to its disinfecting activity.

**ANTHIUM™ C-20** has been designed for use in hospitals, medical and dental offices, nursing homes, industrial and institutional facilities, animal rearing and confinement facilities, animal research facilities and laboratories, meat-packing plants, fish processing plants, dairies, industrial processing plants, poultry hatcheries, agricultural storage facilities (including containers, trailers, rail cars and vessels) and animal transport vehicles and equipment.

**ANTHIUM™ C-20** can also be used in nurseries, greenhouses, landscapes and interiorscapes.

**ANTHIUM™ C-20** is for use on hard, non-porous surfaces such as appliances, basins, bathroom fixtures, bathtubs, cabinets, cages, chairs, countertops, examining tables, floors, sinks, tables, toilets, urinals, and walls and other hard, non-porous surfaces made of fiberglass, Formica, glass, ceramics, metal, plastic and steel.

# ANTHIUM™ C-20

#### ACTIVE INGREDIENT:

Chlorine Dioxide .....	0.72%
Diacyl Dimethyl Ammonium Chloride.....	0.40%
Other Ingredients .....	98.88%
Total .....	100.00%

### 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 INHALED:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

**IF SWALLOWED:** Call a 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.

For 24 hour emergency information on this product, call the **National Pesticides Information Center: 1-800-858-7378** (6:30 AM to 4:40 PM Pacific Time (PT)), seven days a week. During other times call the Poison Control Center: 1-800-222-1222. For transportation emergencies, call Chemtrec at 1-800-424-9300 (US, Canada, Puerto Rico, Virgin Islands) 1-703-527-3887 (All Other Areas). 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.

## KEEP OUT OF REACH OF CHILDREN WARNING

SEE SIDE PANELS FOR ADDITIONAL PRECAUTIONARY STATEMENTS



Manufactured for:

INTERNATIONAL DIOXIDE, INC.

40 WHITECAP DRIVE  
NORTH KINGSTOWN, RI 02852

### DIRECTIONS FOR USE

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

† *Not approved for use in California.*

Disinfection: *Use undiluted (neat).*

Virucidal (against HIV-1, Herpes Simplex and Influenza): *Use undiluted (neat).*

Respiratory illnesses attributable to Pandemic 2009 H1N1 are caused by influenza A virus. Anthium™ C-20 is a broad spectrum hard surface disinfectant that has been shown to be effective against influenza A2 (Hong Kong 68) and is expected to inactivate all influenza A viruses including Pandemic 2009 H1N1 (formerly called swine flu.)

#### Preparation of Acid-Activated Use-Solution

Virucidal (against animal viruses\*): Put 1 part of ANTHIUM™ C-20 into a clean pail and add 4 parts of a 10% acid activator solution. The acid activator can be either citric, phosphoric, hydrochloric, glycolic or an equivalent acid. Allow the acid activated ANTHIUM™ C-20 solution to react in the dark for 15-30 minutes. Then dilute the activated solution with 5 parts water (total 1 part ANTHIUM™ C-20 to 9 parts diluent). Prepare in a well-ventilated area.

\*Acid-Activated Use-Diluted Solution is effective against the following viruses:

- Canine parvovirus, ATCC VR-2017 (10 minutes)
- Rat coronavirus, RCV-SDA-681 (10 minutes)
- Minute Virus of mice , MVM-p (10 minutes)
- Mouse hepatitis virus, MHV-A59 (10 minutes)

Tuberculocidal (against Mycobacterium bovis, BCG): Put undiluted ANTHIUM™ C-20 into a clean pail and add four parts of a 10% acid activator solution. The acid activator can be either citric, phosphoric, hydrochloric, glycolic or an equivalent acid. Allow the acid activated ANTHIUM™ C-20 solution to react in the dark for 60 minutes. Then dilute the activated solution with 5 parts water (total 1 part ANTHIUM™ C-20 to 9 parts diluent). Prepare in a well ventilated area.

#### Preparation of Use-Dilution (Non-Activated)

For controlling mold and mildews: Dilute 1 part ANTHIUM™ C-20 into a clean pail and add 3 parts water to make up your working solution. For killing mold and mildews: Dilute 1 part ANTHIUM™ C-20 into a clean pail and add 3 parts water to make up your working solution.

### APPLICATIONS INSTRUCTIONS:

#### Hospitals, Medical and Dental Offices, Nursing Homes

Apply undiluted ANTHIUM™ C-20 to hard, non-porous surfaces, thoroughly wetting surfaces with a cloth, mop, sponge or sprayer, or by immersion. Treated surfaces must remain wet for 10 minutes. Wipe dry with a cloth, sponge or mop or allow to air dry. For heavily soiled surfaces, pre-cleaning is required. Rinse all surfaces that come in contact with foods such as countertops, appliances, tables and stovetops with potable water before reuse. Do not use on utensils, glassware and dishes.

For sprayer applications, use a coarse spray device. Spray 6-8 inches from the surface; rub with a brush, sponge or cloth. Do not breathe spray.

This product is not to be used as a terminal sterilant/high-level disinfectant on any surfaces or instrument that (1) is introduced directly into the human body, either into or in contact with the bloodstream or normally sterile areas of the body, or (2) contacts intact mucous membranes, but which does not ordinarily penetrate the blood barrier or otherwise enter normally sterile areas of the body. This product may be used to pre-clean or decontaminate critical or semi critical medical devices prior to sterilizations or high-level disinfection.

SPECIAL INSTRUCTIONS FOR CLEANING AND DECONTAMINATING AGAINST HIV OR SURFACES/OBJECTS SOILED WITH BLOOD/BODY FLUIDS that involve healthcare settings or other settings in which there is an expected likelihood of soiling of inanimate surfaces/objects with blood or body fluids, and in which the surfaces/objects soiled with blood or body fluids can be associated with the transmission of HIV-1. ANTHIUM™ C-20 destroys HIV-1 on pre-cleaned environmental surfaces/objects previously soiled with blood or other body fluids in 30 seconds contact. This time will not control other common types of viruses and bacteria listed on the label.

**Personal Protection:** The worker must wear disposable latex gloves or rubber gloves, gown, mask and eye protection to prevent contamination from soiled items. **Cleaning Procedure:** Blood and other body fluids must be thoroughly cleaned from surfaces and objects before application of ANTHIUM™ C-20. **Contact Time:** Allow ANTHIUM™ C-20 to contact treated items for 30 seconds. This time will not control other common types of viruses and bacteria. **Disposal of Infectious Material:** Any blood or other body fluids must be autoclaved and disposed of according to federal, state and local regulations for infectious waste disposal.

EPA REG No. 9150-11  
EPA EST. No. 10183-MI-05

## **Poultry Houses and Animal (poultry, beef, swine) Confinement / Research / Laboratory Facilities**

Use ANTHIUM™ C-20 to treat incubators, floors, walls, ceilings, stainless steel cold rooms, bench tops, hoods, cages, and equipment. For disinfection, use undiluted ANTHIUM™ C-20 and apply as indicated above. Allow at least 10 minutes of contact time. For controlling animal viruses and tuberculosis bacteria, use a 1:10 solution of activated ANTHIUM™ C-20 as described above.

\*Acid-Activated Use-Diluted Solution is effective against the following animal viruses:

- Canine parvovirus, ATCC VR-2017 (10 minutes)
- Rat coronavirus, RCV-SDA-681 (10 minutes)
- Minute Virus of mice , MVM-p (10 minutes)
- Mouse hepatitis virus, MHV-A59 (10 minutes)

Prior to treatment, remove all animal and feed from premises, animal transport vehicles, enclosures, coops and crates. Remove all bedding, litter, droppings and manure from floors, walls, and surfaces of facilities occupied and traversed by animals. Thoroughly clean all surfaces with soap or detergent and rinse with water. Do not house animals or employ equipment until treatment has been absorbed, set or dried. Thoroughly scrub all treated feed racks, automatic feeders, waters, and other equipment which dispenses food or water with soap or detergent and rinse with potable water before reuse.

### **Animal Transport Vehicles and equipment**

Use ANTHIUM™ C-20 to control animal pathogens on vehicles and equipment that are used to transport live animals (poultry, swine, beef). Prior to application of ANTHIUM™ C-20, remove all animals from the vehicle. Clean the vehicle with water to remove debris and dirt. Then apply one quart of ANTHIUM™ C-20 through a foaming wand, at a maximum dilution rate of 1:320, with dilution water to the interior and exterior of the vehicle, transport cages, crates and other related equipment. Allow at least 10 minutes of contact time. Allow to air dry.

### **† Shoe Bath**

To prevent tracking of animal pathogens into animal areas, shoe baths containing one inch of freshly made solution (1-2 ounces of ANTHIUM™ C-20 per gallon of water) should be placed at all entrances to buildings. Scrape waterproof work boots and then place in the shoe bath for at least 60 seconds. Change the shoe bath solution daily or when solution appears soiled.

### **Agricultural Storage Facilities (Containers, Trailers, Rail Cars and Vessels)**

Use ANTHIUM™ C-20 to control spoilage microorganisms in agricultural storage facilities and containers, trailers, rail cars and vessels. Prior to application of ANTHIUM™ C-20, sweep and wash vehicle with water to remove debris and dirt. Then apply one quart of ANTHIUM™ C-20 through a foaming wand, at a maximum dilution rate of 1:320, with dilution water. Foam the diluted product on the interior and exterior of the trailer, rail car or vessel. Allow at least a 10 minute contact time. A potable water rinse is required for any food-contact surface that is treated.

### **MOLD AND MILDEW CONTROL (For Hospitals, Institutions, and Home)**

ANTHIUM™ C-20 controls mold and mildew on hard non-porous surfaces. ANTHIUM™ C-20 works rapidly and thoroughly so it is an ideal product for controlling molds in a single treatment. The efficacy and fast mode of action makes ANTHIUM™ C-20 the perfect product for effective single operation mold and mildew control.

### **To Treat Surfaces Contaminated With Mold & Mildew**

1. Remove all heavy build-up of gross filth and loose debris from areas to be treated.
2. Mix 1 part of the concentrate ANTHIUM™ C-20 with 3 parts water.
3. Apply the product onto the surface with a commercial low-pressure sprayer 6 – 8 inches from the surface or utilizing a wet mop, sponge, wipe or other suitable application device.

Note: Where mist or vapors may be generated, proper ventilation must be provided in accordance with good ventilation practices. In the absence of proper environmental controls, a NIOSH/MSHA jointly approved respirator is advised

4. Make sure the treated area is thoroughly wet for at least 10 minutes and allow to air dry
5. Repeat every 7 days or more frequently if growth reoccurs.

### **AGRICULTURAL USE REQUIREMENTS**

Use this product only in accordance with its labeling, and with the Worker Protection Standard, 40 CFR part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on the label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard. Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

### **Personal Protective Equipment (PPE):**

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is: long-sleeved shirt, long pants, and shoes with socks. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for

washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

### **NON-AGRICULTURAL USE REQUIREMENTS**

The requirements in this box only apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR part 170). The WPS applies when this product is used on farms, forests, nurseries, or greenhouses. Keep children and pets out of treated areas until sprays have dried.

### **PERSONAL PROTECTIVE EQUIPMENT (PPE):**

Long-sleeved shirt, long pants and shoes with socks.

### **†Horticulture Uses**

ANTHIUM™ C-20 is a general antimicrobial and algacide that has been designed for non-foliar use in the Nursery, Greenhouse, Landscape & Interiorscape areas of ornamental horticulture. It will control a variety of fungal, bacterial and viral plant pathogens, bacterial and fungal leaf rots, slime forming fungi, odor causing bacteria and algae. ANTHIUM™ C-20 may be used as part of an overall program of microbe and algae control on a variety of surfaces and in water management equipment and devices.

### **†Work Area and Benches:**

ANTHIUM™ C-20 has been designed to control cross-contamination that may occur between plants or production surfaces. Apply ANTHIUM™ C-20 routinely before each work period and again after each plant cycle is completed. Remove all debris and litter from surfaces prior to application of ANTHIUM™ C-20. Then mix 9 fl. oz. of ANTHIUM™ C-20 per gallon of water and apply the use-solution to hard surfaces and watering devices by thoroughly wetting surfaces with cloth, mop, sponge or sprayer. Do not apply directly to plant material. Treated surfaces must remain wet for 10 minutes. Allow to air dry. For sprayer applications, use a coarse sprayer. ANTHIUM™ C-20 is effective in reducing the transfer of fungal and bacterial pathogens that cause plant diseases such as root rots, crown rots, botrytis, and downy mildews.

### **† Pots and Flats:**

Apply ANTHIUM™ C-20 to used planting devices such as pots and flats. Prior to application, remove all loose soil and plant residue. Then soak the pots and flats in a solution containing 18 fl. oz. of ANTHIUM™ C-20 per gallon of water for 10-15 minutes. Remove from solution and allow to air dry before use.

### **† Cutting Tools:**

Use ANTHIUM™ C-20 to control plant pathogens on cutting tools. Soak or dip cutting tools in a use-diluted solution of 9 fl. oz. of ANTHIUM™ C-20 per gallon of water. Allow cutting tools to remain wet for best results. At end of work period, dry and oil tools, or follow other specific instructions provided by tool manufacturer.

### **† Recirculating Water Systems:**

Add ANTHIUM™ C-20 at a concentration of 2-5 ppm (4-9 fl. oz. per 100 gallons) for the control and prevention of water borne fungal and bacterial pathogens. Repeat application weekly for best results.

### **† Bulb Dip:**

Prepare a solution using 9-18 fl. oz. of ANTHIUM™ C-20 per 1 gallon of water. Soak cleaned bulbs for approximately 10 minutes, remove and allow to drip dry before storage. Treatment acts as a surface disinfectant for a variety of fungal and bacterial pathogens but will not control systemic pathogen events.

### **† Greenhouse Glass:**

Mix 4-9 fl. oz. of ANTHIUM™ C-20 per 1 gallon of water and apply as a wet down spray to glass surfaces. Use with proper ventilation and allow application to dry. After 24 hours, wash off dead algae with water for improved light penetration. Reapply as needed. Avoid overspray, do not apply directly to plant material.

### **† Walkways and Under Bench Areas:**

Mix 4-9 fl. oz. of ANTHIUM™ C-20 per 1 gallon of water and apply as a wet down spray to floor and under bench surfaces. For best results, do not rinse. Use with proper ventilation and allow application to dry. Reapply as needed. Avoid overspray; do not apply directly to plant material. Floor grown plants/flats may be returned after surface has dried. May be used in conjunction with other management techniques for the control of fungi, gnats and shore fly larvae.

### **† Evaporative Coolers:**

Add 4-9 fl. oz. of ANTHIUM™ C-20 for each 10 gallons of water volume contained in the system and allow to circulate throughout cooling pads and catch basins. For best results, repeat addition as needed or on a routine schedule every 14 days.

### **† Retention Basins and Ponds:**

ANTHIUM™ C-20 can be used for the control of algae in irrigation water recapture systems and retention ponds. Add ANTHIUM™ C-20 at a concentration of 2-5 ppm (4-9 fl. oz. per 100 gallons) for the control and prevention of water borne fungal and bacterial pathogens. Repeat application weekly for best results. Do not use where fish are present.

### **† Decorative Pools, Fountains, and Water Displays:**

For initial dosage when algae are present, apply 9-18 fl. oz. of ANTHIUM™ C-20 per 100 gallons of water volume to achieve a 5-10 ppm solution. For maintenance, add no more than ½ the initial dosage as needed or on a routine schedule every 14 days. Do not use when fish are present. When unit is to remain empty or not in use for extended

period, apply a wet down spray to the hard surface of the unit at a rate of ½ fl. oz. per gallon.

### **Sewer backup & river flooding:**

During mitigation procedures, remove gross filth or heavy soil along with non-salvageable materials. Saturate all affective areas with a sprayer using a coarse spray tip, before and after cleaning and extraction.

### **Carpets, Carpet cushions and other porous materials:**

Such as sub floors, drywall, trim and frame lumber, tackless strip and paneling: For water damage from a clean water source, extract excess water. Test hidden area for colorfastness. Remove gross filth or heavy soil. Apply directly with a sprayer using a coarse spray tip, to fully saturate affected materials. Roll, brush or agitate into materials and allow the materials to remain damp for 10 minutes. Follow with a thorough extraction. Dry rapidly and thoroughly.

### **Special Instructions for Cleaning Carpet Odor:**

This product may be used in industrial and institutional areas such as homes, motels, hotel chains, nursing homes, schools and hospitals. For use on wet cleanable synthetic fibers. Do not use on wool. Vacuum carpet thoroughly prior to cleaning. Test fabric for color fastness.

Do not mix this product with other cleaning products. Follow the cleaning procedures specified by the manufacturer of the cleaning equipment. After using this product, set the carpet pile and protect the carpet from furniture legs and bases while drying. Do not over wet. If applied to stain resistant nylon carpet, apply a fabric protector according to the carpet manufacturer's directions.

### **Carpet Deodorizer:**

For Home, Institutional, Industrial and Hospital Use  
This product cleans and deodorizes the carpet. It can be used in industrial and institutional areas such as homes, motels, hotel chains, nursing homes and hospitals.

Vacuum carpet thoroughly prior to application. Follow the injection and/or extraction procedures as specified for any conventional steam cleaning equipment you are using. For rotary floor machines, spray on carpet at a rate of 300-500 sq. ft. per gallon.

After using the product, set carpet pile in one direction with a stiff brush. Place aluminum foil under the legs of furniture while carpet is drying. Over-wetting can cause carpet to shrink. Manufacturer assumes no responsibility for over-wetting misuse.

Note: This product should not be mixed with other cleaning products.

### **Water / Smoke Damage Restoration [Cleaning and De-Odorizing Only]:**

Effective against odor for home, institutional, industrial and hospital use.

This product is particularly suitable for use in water damage restoration situations against odor on the following porous and semi-porous materials: carpets, carpet cushion, sub floors, drywall, trim frame lumber, tackless strip and paneling. Saturate affected materials with enough product to remain wet for at least 10 minutes. Use proper ventilation.