

June 23, 2005

Thomas C. McEntee
International Dioxide, Inc.
554 Ten Rod Road
North Kingstown, RI 02852

Subject: Anthium AGP
EPA Registration No. 9150-12
Submission Date: December, 2004
Receipt Date: February 1, 2005

Dear Mr. McEntee:

The following amendment, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is acceptable with the condition listed below:

- Expansion of use directions to include activation with equipment and co-feed chemicals

Condition

Revise the precautionary labeling for Personal Protective Equipment to include specified respirator equipment approved for use with Chlorine Dioxide (i.e., TC-23C cartridge or TC-14G canister.

General Comments

A stamped copy of the labeling accepted with conditions is enclosed. Submit a 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 Wanda Henson at (703) 308-6345.

Sincerely,

Emily H. Mitchell
Product Manager - Team 32
Regulatory Management Branch II
Antimicrobials Division (7510C)

CONCURRENCES

SYMBOL	7510C						
SURNAME	HENSON						
DATE	6-23-05						

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.

Personal Protective Equipment

Chemical-resistant gloves, goggles / face-shield and respirator (a NIOSH approved canister/cartridge respirator) must be worn during mixer-loader tasks associated with pre-storage application of Anthium AGP. Chemical-resistant gloves must be worn in all activities where the worker is placed in direct contact with either the wet treated potatoes during inspections or disease monitoring in the storage shed or the humidification water system/process water tank during cleaning or maintenance. Do not allow unprotected workers in the area to be exposed above the permissible exposure limit (PEL) of 0.1 ppm of chlorine dioxide for an 8-hour time-weighted average (TWA) or 0.3 ppm for any 15-minute short-term exposure limit (STEL). Do not allow high concentrations of chlorine dioxide to accumulate within a confined space.

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 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 gaseous 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.

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

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: Triple rinse (or equivalent). 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 re-seal container. Isolate in open, well-ventilated area. Flood with large quantities of water. Cool unopened drums in vicinity by water spray.

**ACCEPTED
WITH COMMENTS
EPA Letter Dated:**

JUN 23 2005

Under the Federal Insecticide,
Fungicide, and Rodenticide Act as
amended, for the pesticide,
registered under EPA Reg. No. 9150-12



**5% AQUEOUS STABILIZED CHLORINE DIOXIDE FOR
POST-HARVEST TREATMENT OF POTATOES
AND POTATO STORAGE CELLARS**

Active Ingredient

Chlorine dioxide 5.0%
Inert Ingredients 95.0%
Total 100.0%

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

FIRST AID	
If Inhaled	<ul style="list-style-type: none"> • 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 on Skin or Clothing	<ul style="list-style-type: none"> • 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 in Eyes:	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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.
Have a 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.	

See Side Panels for Additional Precautionary Statements

EPA Reg. No. 9150-12
EPA Est. No. 9150-RI-01

NET WT: _____ Gal.

Manufactured by:



International Dioxide, Inc.
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.

For Treatment of Late Blight and Other Potato Storage Diseases Using Anthium AGP for Suppression of the Microbial Population Anthium AGP must be activated according to the Batch or Mechanical Alternatives (A or B)

A) Batch Preparation of an Activated Solution

1) Anthium AGP may be activated with a food-grade acid to pH 2.6 prior to dilution down to 200 or 400 ppm.

2) For a 10-gallon batch, add 9.2 gallons of water and 0.8 gallons of Anthium AGP. Then add 15 fl. oz. of 30% phosphoric acid or equivalent to attain a pH of 2.6. Let the mixture react for 1-6 hours. The Anthium AGP/phosphoric acid mixture will yield an activated solution containing 4,000 ppm available chlorine dioxide.

3) As an alternate preparation method, add 9.2 gallons of water and 0.8 gallons of Anthium AGP together. Then add 4.3 fl. oz. of 36% hydrochloric acid or equivalent to attain a pH of 2.6. Let the mixture react from 1-3 hours. The Anthium AGP/hydrochloric acid mixture will yield an activated solution containing 4,000 ppm available chlorine dioxide.

4) Prepare a 200 ppm available chlorine dioxide solution by diluting 1/2 part of the 4,000 ppm solution with 9 parts of water. Prepare an activated 400 ppm available chlorine dioxide solution by diluting 1 part of the 4,000 ppm solution with 9 parts of water.

B) Mechanical Equipment Preparation of an Activated Solution

1) Using a generator such as the Oxychlor @DS and co-feed chemicals, sodium hypochlorite and a food grade acid such as hydrochloric prepare a chlorine dioxide stream according to the rates and limitations of D and E in the following paragraphs.

C) Application Rates for Potatoes Going into Storage

Spray 0.5 gallons of the activated 400 ppm available chlorine dioxide solution per ton of potatoes going into storage. Make one application to potatoes going into storage.

D) Application Rates for Stored Potatoes

Either periodic or continual treatment of the humidification water systems for potatoes may be made.

For continual treatment of high-risk stored potatoes, apply an initial treatment of 200 ppm available chlorine dioxide (add 1 part of the activated 400 ppm chlorine dioxide solution per part of humidification water) as either a mist into the air stream or as a fog directly into the plenum. Following the initial treatment, do not exceed 50 ppm of available chlorine dioxide (1 part of the activated 400 ppm chlorine dioxide solution per 7 parts of humidification water).

For the periodic treatment of stored potatoes with unknown risk, a treatment of 200 ppm available chlorine dioxide (1 part of the activated 400 ppm available chlorine dioxide solution for every part of humidification water) may be applied as either a mist into the air stream or a fog directly into the plenum.

To reduce the amount of water added to the stored potatoes during fogging treatments, concentrations up to 400 ppm available chlorine dioxide may be applied into the air stream. Fogging treatments may not exceed 0.4 gallons of Anthium AGP per 500 tons of treated potatoes in any single application.

E) Limitations

- 1) A maximum of one application may be made to potatoes going into storage. A maximum of five (5) applications per month may be made through the humidification system by either fogging or misting.
- 2) A potable water rinse is required on all treated potatoes prior to further processing.

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