65402-2 08/01/2013 1/4

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

EPA United States Environmental Protection Agency **Office of Pesticide Programs**

AUG 1 2013

FMC Corporation
Peroxygens Division
1735 Market Street
Philadelphia, PA 19103

AGENT: Keller and Heckman LLP
1001 G Street, N.W., Suite 500 West
Washington, D. C. 20001

Attention: Michael T. Novak

Subject: VigorOx Antimicrobial Agent
EPA Registration No. 65402-2
Amendment Dated May 28, 2013

The amendment, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, is acceptable.

Proposed Amendment

- Minor Labeling Changes

General Comments

A stamped copy of the "accepted" product labeling is enclosed for your records.

If you have any questions concerning this letter, please contact Martha Terry at (703) 308-6341.

Sincerely

Marshall Swindell
Product Manager (33)
Regulatory Management Branch 1
Antimicrobials Division (7510P)

Enclosure

MASTER LABEL

VigorOx® Antimicrobial Agent

EPA Registration No. 65402-2
EPA Est. No. 00279-NY-003

VigorOx® Antimicrobial Agent is for biofouling and slime control in :

- **Pulp and paper mill systems**
- **Recirculating cooling water systems**
- **Coating preservation**
- **Dispersed pigment preservation**

Active Ingredients:	
Peroxyacetic Acid	**5.1%**
Hydrogen Peroxide	**21.7%**
Inert Ingredients:	**73.2%**
Total	**100.0%**

KEEP OUT OF REACH OF CHILDREN

DANGER

See side panel for additional precautionary statements

FMC Corporation
[Peroxygens Division]
[Environmental Solutions Division]
1735 Market Street
Philadelphia, Pennsylvania 19103

Bracketed [ ] Words and/or Phrases are Optional Language That May or May Not Appear on Label

NET CONTENTS: GALLONS: POUNDS:

Precautionary Statements: Hazards to Humans and Domestic Animals

Danger – Corrosive. Causes irreversible eye damage and skin burns. Harmful if swallowed. May be fatal if absorbed through the skin. Do not get in eyes, on skin or on clothing. Wear protective eyewear (goggles, face shield, or safety glasses), chemical chemical resistant apron or coveralls and chemical gloves when handling concentrate. Wash thoroughly with soap and water after handling and before eating, drinking or using tobacco. Remove contaminated clothing and wash before reuse.

Physical and Chemical Hazards. Strong oxidizing agent. Mix only with water. VigorOx® Antimicrobial Agent is not combustible, however, at temperatures exceeding 156°F, decomposition occurs releasing oxygen. The oxygen released could initiate or promote combustion or other materials.

Environmental Hazards – This pesticide is toxic to birds, mammals, fish and aquatic life. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with 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.

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 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 a poison control center or doctor. • Do not give anything by mouth to an unconscious person.
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.	

MASTER LABEL

Storage and Disposal

Storage

Never return VigorOx® to the original container after it has been removed. Avoid all contaminants especially dirt, caustic, reducing agents, and metals. Contamination and impurities will reduce shelf life and can induce decomposition. In case of decomposition, isolate container, douse container with cool water and dilute VigorOx® with large volumes of water.

Avoid damage to containers. Keep container closed at all times when not in use. Keep container out of direct sunlight. To maintain product quality, store at temperatures below 86°F. Do not store on wooden pallets.

Procedure for Leak or Spill

Stop leak if this can be done without risk. Shut off ignition sources: no flames, smoking, flares or spark producing tools. Keep combustible and organic materials away. Flush spilled materials with large quantities of water. Undiluted material should not enter confined spaces.

Disposal

Pesticide Disposal

If material has been spilled, an acceptable method of disposal is to dilute with at least 20 volumes of water followed by discharge into suitable treatment system in accordance with all local, state, and Federal environmental laws, rules, regulations, standards, and other requirements. Because acceptable methods of disposal may vary by location, regulatory agencies should be contacted prior to disposal.

VigorOx® which is to be discarded, should be disposed of as hazardous waste after contacting the appropriate local, state, or Federal agency to determine proper procedures.

Container Disposal

Nonrefillable containers less than 5 gallons. Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. 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.

Nonrefillable containers greater than or equal to 5 gallons. Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. 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 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. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Empty drums are not returnable to FMC unless special arrangements have been made. Dispose of drums in accordance with local, state, and Federal regulations.

All Refillable containers. Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Return to FMC for reuse.

Directions For Use

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

Biofouling Control In Pulp and Paper Mill Systems

For use in the manufacture of paper and paperboard intended for food and non-food contact. VigorOx® Antimicrobial Agent can be used to control bacterial, fungal and yeast growth in pulp, paper and paperboard mills.

1. Severely fouled systems should be cleaned before initial treatment with VigorOx® Antimicrobial Agent. VigorOx® should be added directly to the system and not mixed with any other chemicals or additives. Other chemicals can be added separately. Contamination with other chemicals could result in product decomposition.

2. Add VigorOx® Antimicrobial Agent at a point in the system where it can be mixed uniformly with the pulp, e.g., the beater, hydropulper, fan pump, broke pump, etc.

3. Intermittent feed method: Apply 0.5 lb. to 4.5 lbs. (7 to 65 fluid ounces) of VigorOx® per ton (dry basis) of pulp or paper produced, for two to three hours every eight hour shift. Maintain a concentration that provides adequate control. Daily rate could change depending on the severity of the biofoulling.

4. Continuous feed method: Initially, use the intermittent feed method to achieve control. When control is accomplished apply VigorOx® continuously at the rate determined adequate for intermittent control. Then reduce the rate of addition to the lowest level sufficient to maintain control. Depending on the severity of the biofouling, control usually can be maintained using a continuous rate of 0.3 to 4.5 lb. (4 to 65 fluid ounces)
of VigorOx® solution per ton (dry basis) of pulp or paper produced on a continuous basis. This will provide 10 to
110 ppm of peroxyacetic acid and 35 to 490 ppm of hydrogen peroxide.

Control of Bacteria and Fungi in Dispersed Pigments

VigorOx® Antimicrobial Agent can be used to control bacteria and fungi in the manufacture and storage of dispersed pigments such as kaolin clay, titanium dioxide, calcium carbonate, calcium sulfate, barium sulfate, magnesium silicate and kieselguhr used in pain and paper production.

1. Apply 0.3 to 1.5 lb. (4 to 21 fluid ounces) (135 to 680 grams of VigorOx® solution to each 1, 000 lb. (454 kg) of fluid. This will provide 300 to 1500 ppm of product. (15 to 80 ppm peroxyacetic acid and 70 to 340 ppm hydrogen peroxide)

Control of Slime Forming Bacteria in Recirculating Cooling Water Systems (Cooling Towers, Evaporative Condensers)

1. Severely fouled system should be cleaned before adding the VigorOx® solution. VigorOx® should be added directly to the system and not mixed with any other chemicals or additives. Other chemicals should be added separately. Contamination with other chemicals could result in product decomposition.

2 .Add the VigorOx® solution at a point in the system where uniform mixing and even distribution will occur, for example the cooling tower basin sump.

3. Intermittent feed method: When the system is noticeably fouled apply 1.0 to 1.5 lb (14 to 21 fluid ounces) of VigorOx® solution per 1000 gallons of water in the system. Repeat until control is achieved. When microbial control is evident, add 1.0 lb. (14 fluid ounces) of VigorOx® solution per 1000 gallons of water in the system every day, or as needed to maintain control. The daily dose rate could vary depending upon the severity of the biofouling.

4. Continuous feed method: Initial dose – When the system is just noticeably fouled, apply 1.0 to 1.5 lb. (14 to 21 fluid ounces) of VigorOx® solutions per 1,000 gallons of water in the system. When

microbial control is achieved, start adding VigorOx® solution continuously at a rate of 1.5 lb (21 fluid ounces) per 1,0000 gallons of water. (This will provide 10 ppm peroxyacetic acid and 40 ppm hydrogen peroxide). Then reduce the rate of addition to a level that is sufficient to maintain control. The dose rate may have to be adjusted to account for losses due to blowdown and evaporation.

Control of Bacteria and Fungi in Coating Preservation
Not for use in the manufacture of materials intended for food contact. VigorOx® Antimicrobial Agent can be used as an in-container preservative for the control of bacteria and fungi in water-based coating such a paper coatings.

1. Add 0.3 to 1.5 lb. (4 to 21 fluid ounces/135 to 680 grams) of VigorOx® solution to each 1,000 lbs. (454 kg) of water. This will provide 300 to 1500 ppm of product (15 to 80 ppm peroxyacetic acid and 70 to 340 ppm hydrogen peroxide).

In all applications always prepare a new solution daily to ensure effectiveness. Do not re-use solutions. Dispose of all used solutions.

EMERGENCY TELEPHONE NUMBERS
(24 HOURS)
MEDICAL: COLLECT 303-595-9048
TRANSPORTATION: 800-424-9300
OTHER: COLLECT 716-879-0400

ESL: 052210 REV: 05/10/13

4846-2064-4104, v. 2

ACCEPTED
with COMMENTS
EPA Letter Dated:

AUG 1 2013

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide, registered under EPA Reg. No.
65402-2