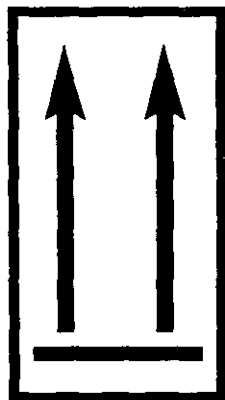


PM 33

65402-3

1/21/99

1 of 3



VigorOx™ SP-15 Antimicrobial Agent

EPA Registration No. 65402-3
EPA Est. No. 00279-NY-003

VigorOx™ SP-15 Antimicrobial Agent is for
biofouling and slime control in:

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

For Industrial Use Only

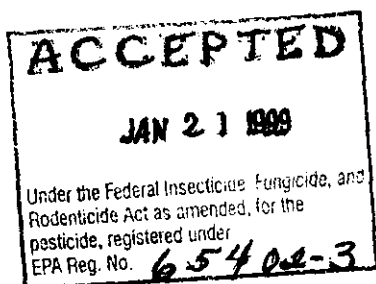
Active Ingredients: Peroxyacetic Acid.....15%

Inert Ingredients:85%

**KEEP OUT OF REACH OF CHILDREN
DANGER**

See side panel for additional precautionary statements

FMC and VigorOx™ are trademarks of FMC Corporation.



ACCEPTED
JAN 21 1999
Under the Federal Insecticide, Fungicide, and
Rodenticide Act as amended, for the
pesticide, registered under
EPA Reg. No. 65402-3

FMC

FMC Corporation
Active Oxidants Division
1735 Market Street
Philadelphia Pennsylvania 19103

Precautionary Statements Hazards to Humans and Domestic Animals

DANGER

Corrosive, causes eye and skin damage. Harmful or fatal if swallowed. Do not get in eyes, on skin, or on clothing. Wear goggles or face shield and rubber gloves when handling. Wash thoroughly with soap and water after handling. Do not breathe vapor or spray mist. Do not enter an enclosed area without proper respiratory protection.

Physical or Chemical Hazards

Strong oxidizing agent. Mix only with water. VigorOx™ SP-15 is not combustible; however, at temperatures exceeding 156°F, decomposition occurs releasing oxygen. The oxygen released could initiate or promote combustion of other materials.

Environmental Hazards

This pesticide is toxic to birds, mammals, fish and aquatic invertebrates. 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.

Any solution released from the system should be diluted with water and tested for residuals to ensure that there is less than 3 ppm peroxygen remaining.

Statement of Practical Treatment

If swallowed: Rinse mouth with water. Dilute by giving 1 or 2 glasses of water. Do not induce vomiting. See a physician.

If inhaled: Remove to fresh air. If breathing discomfort occurs, call a physician. If breathing has stopped, apply artificial respiration and see a physician.

If in eyes: Immediately flush with water for at least 15 minutes, lifting the upper and lower eyelids intermittently. See a physician.

If on skin: Immediately flush with plenty of water while removing contaminated clothing and/or shoes. Wash skin thoroughly with soap and water. See a physician. Wash contaminated shoes and clothing before reuse.

Note to Physician: Probable mucosal damage may contraindicate the use of gastric lavage.

Storage and Disposal

Storage
NEVER RETURN VigorOx™ SP-15 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 a decomposition, isolate container, douse container with cool water and dilute VigorOx™ SP-15 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 material 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™ SP-15 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

Empty drums are not returnable to FMC unless special arrangements have been made. Triple rinse drums with water. Dispose of drums in accordance with local, state, and Federal regulations. **Do not 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™ SP-15 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™ SP-15 antimicrobial agent. VigorOx™ SP-15 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 the VigorOx™ SP-15 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 1.2 lbs. (7 to 16 Fluid ounces) of VigorOx™ SP-15 per ton (dry basis) of pulp or paper produced, for two to three hours every eight hour shift. Maintain an addition rate that provides adequate control. Daily rate could change depending on the severity of the biofouling.

4. Continuous feed method: Initially, use the intermittent feed method to achieve control. When control is accomplished, continuously apply VigorOx™ SP-15 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 0.2 to 1.2 lb. (2.6 to 16 Fluid ounces) of VigorOx™ SP-15 solution per ton (dry basis) of pulp or paper produced on a continuous basis. This will provide 15 to 100 ppm of peroxyacetic acid.

Control of Bacteria and Fungi in Dispersed Pigments

VigorOx™ SP-15 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 paint and paper production.

Apply 0.2 to 1.2 lb. (2.6 to 16 Fluid ounces) (90 to 545 grams) of VigorOx™ SP-15 solution to each 1,000 lb. (454 Kg) of fluid. This will provide 200 to 1200 ppm of product, or 35 to 205 ppm peroxyacetic acid.

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

1. Severely fouled systems should be cleaned before adding the VigorOx™ SP-15 solution. VigorOx™ SP-15 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™ SP-15 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 0.8 to 1.2 lb. (10 to 16 Fluid ounces) of VigorOx™ SP-15 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™ SP-15 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.

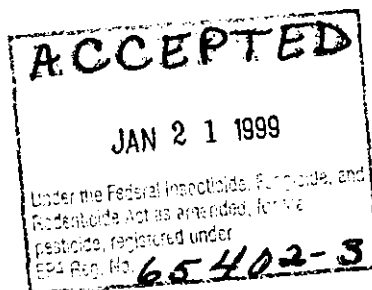
4. Continuous feed method: Initial dose - When the system is just noticeably fouled, apply 0.8 to 1.2 lb. (10 to 16 Fluid ounces) of VigorOx™ SP-15 solution per 1000 gallons of water in the system. When microbial control is achieved, start adding VigorOx™ SP-15 solution continuously at a rate of 1.0 lb. (14 Fluid ounces) per 1000 gallons of water. (This provides 17 ppm peroxyacetic acid). Then reduce the rate of addition to a level 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 coatings such as paper coatings.

Add 0.2 to 1.2 lb. (2.6 to 16 Fluid ounces) (90 to 545 grams) of VigorOx™ solution to each 1,000 lb. (454 Kg) of water. This will provide 200 to 1200 ppm of product or 35 to 205 ppm peroxyacetic acid.



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

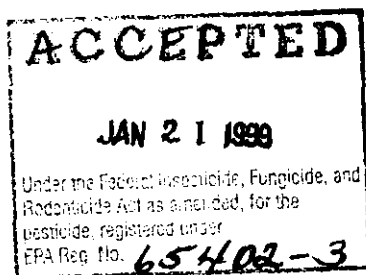
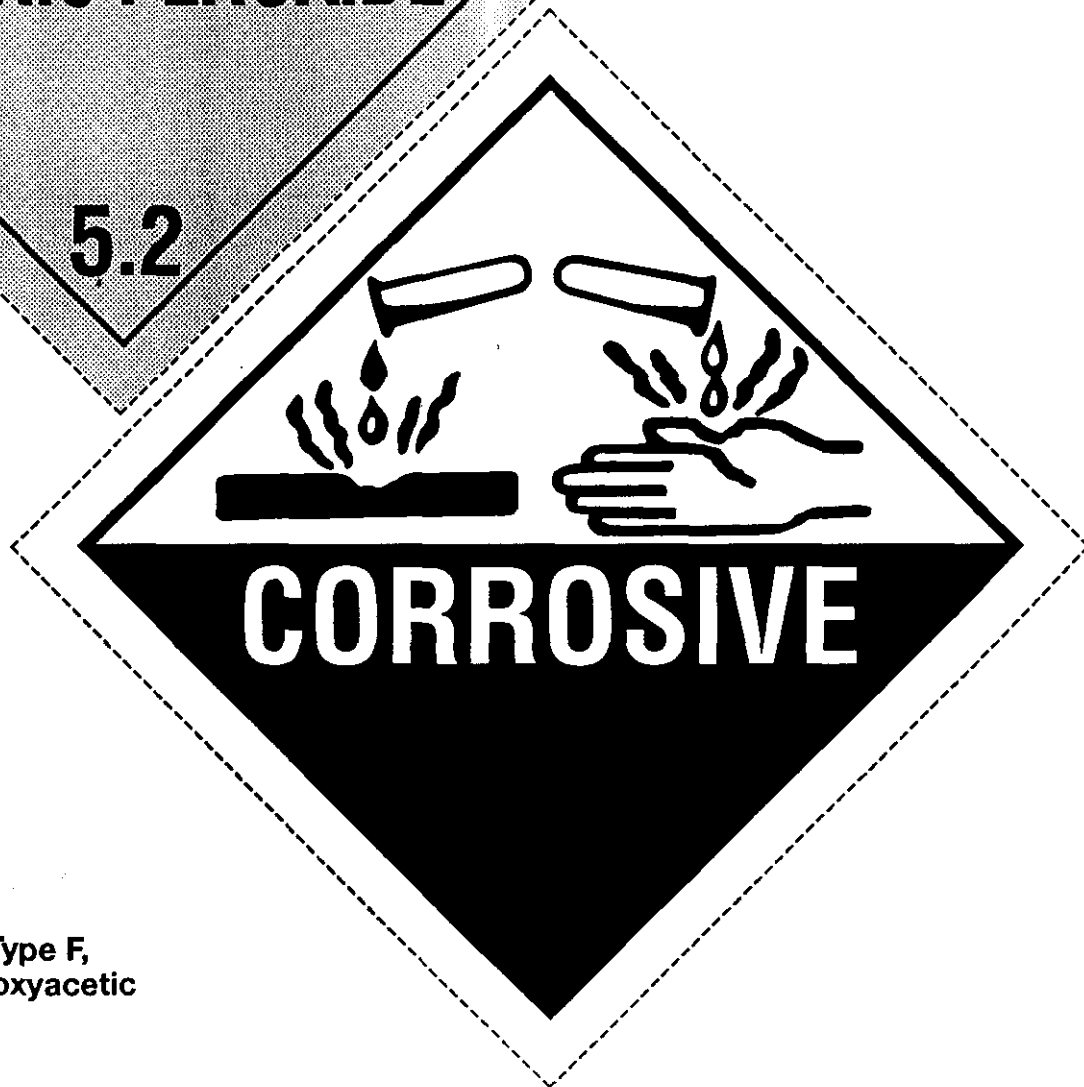
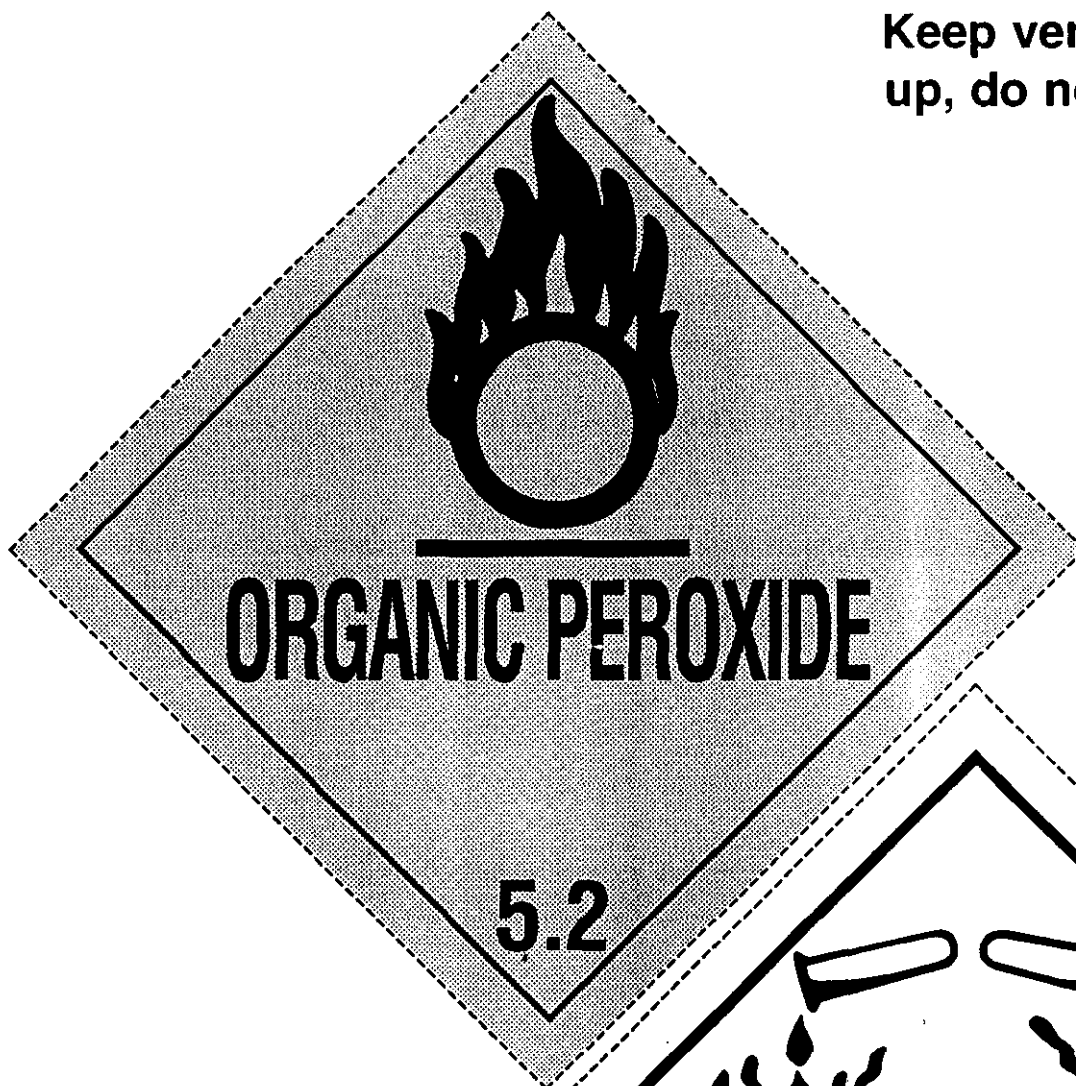
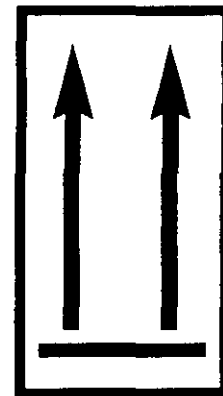
EMERGENCY TELEPHONE NUMBERS
(24 HOURS)
MEDICAL: COLLECT 303-595-9048
TRANSPORTATION: 800-424-9300
OTHER: COLLECT 716-879-0400

Net Contents

Gallons

Pounds

Keep vent end
up, do not roll



D.O.T. Description:
Organic Peroxide Type F,
Liquid ($\leq 18\%$ Peroxyacetic
Acid Stabilized)

UN 3109