

74517-1

08/26/2002

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U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Antimicrobials Division (7510C)
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

EPA Reg. Number:

Date of Issuance:

74517-1

AUG 26 2002

Term of Issuance:

Conditional

Name of Pesticide Product:

ZYDOX AD-05

NOTICE OF PESTICIDE:

Registration
 Reregistration

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

ZYCHEM TECHNOLOGIES, INC.
Storaneset 44
P.O. Box 254
Indre Arna, N-5888 Bergen, Norway

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA sec. 3(c)(7)(A) provided that you:

1. Submit and/or cite all data required for registration/reregistration of your product under FIFRA sec. 3(c)(5) when the Agency requires all registrants of similar products to submit such data; and submit acceptable responses required for reregistration of your product under FIFRA section 4.
2. Make the following label changes:
 - a. Revise the EPA Registration Number to read, "EPA Reg. No.74517-1."

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Signature of Approving Official:

Robert S. Brennis,
Product Manager 32

Date:

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b. Correct the following typographical errors:

The third sentence under the "Chemical Hazards" should read: **Mix** only into water.

Under the "Environmental Hazards" statement remove the number "1 and capitalize the letter D" between the National Pollutant Discharge Elimination System.

Under the treatment "Directions For Use" revise the sentence "... use Zydox AD-05 with chlorine dioxide form system (FOAM ADD 10)." to read "... use Zydox AD-05 with chlorine dioxide **foam** system (FOAM ADD 10)."

Under the "Sanitization of Food Contact Surfaces" revise the last sentence to read "... **followed** by a potable water rinse."

3. Submit two copies of the revised final printed label for the record

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records.

ZYDOX AD-05

**CHLORINE DIOXIDE PRECURSOR FOR MICROBIAL CONTROL IN
WATER AND WASTEWATER AND ON HARD SURFACES**

ACTIVE INGREDIENT:

Sodium Chlorite.....7.5%

INERT INGREDIENTS92.5%

TOTAL..... 100.0%

**KEEP OUT OF REACH OF CHILDREN
DANGER**

See Side Panels for Additional Precautions

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
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.

If I 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.

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

HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or
doctor. or going for treatment. You may also contact 1-800-858-7378 for emergency
medical treatment information.

EPA. REG. NO.

EPA EST.

Manufactured by:

NET CONTENTS:

**ACCEPTED
with COMMENTS
EPA Letter Dated:**

AUG 26 2002

**Zychem Technologies
P.O. Box 254 Storanaset 44
Indre Arna, N-5888 Bergen, Norway**

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PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

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DANGER

HIGHLY CORROSIVE CAUSES EYE AND SKIN DAMAGE MAY BE FATAL IF SWALLOWED.
Irritating to nose and throat. Avoid breathing vapor. Do not handle with bare hands. Wear goggles or face shield and neoprene gloves and use only clean, dry utensils when handling this product. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash separately to avoid fire.

CHEMICAL HAZARDS

Dry sodium chlorite is a strong oxidizing agent. This product becomes a fire or explosive hazard if allowed to dry. Do not mix only into water. Contamination may start a chemical reaction with generation of heat, liberation of hazardous gases (chlorine dioxide is a poisonous, explosive gas) and possible fire and explosion. Do not contaminate with garbage, dirt, organic matter, household products, chemicals, soap products, paint products, solvents, acid, vinegar, beverages, oils, pine oil, dirty rags, or any other foreign matter.

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.

DIrections FOR USE

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

TREATMENT

ZYDOX AD-05 is a source of chlorine dioxide for use in controlling microorganisms in water and waste-water systems and on hard surfaces. In treating water systems, ZYDOX AD-05 must be used only in conjunction with approved chlorine dioxide generation equipment which utilizes chlorine gas, or a combination of chlorine solution and/or muriatic acid or food grade acid as the activating agent. In treating hard surfaces, use ZYDOX AD-05 with chlorine dioxide foam system (FOAM ADD 10). In general, the chlorine dioxide solution is applied to achieve residual concentrations of 10 ppm or less for water treatment and from 100-200 ppm for hard surface treatment.

Because of the variability of demand in water and process systems the dosage of chlorine dioxide which is required to achieve the target residuals, is normally lower for continuous feed systems than for slug or timed feed applications. The minimum acceptable residual for chlorine dioxide, as determined by a verified procedure is 0.1 ppm for a minimum of one minute contact time.

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POINTS OF ADDITION

In all cases, generated chlorine dioxide solution should be applied in such a manner to ensure adequate mixing and minimal volatilization. The water stream to be treated may either be passed directly through the chlorine dioxide generator or treated via side stream injection point. The generation system employed should be in good working order and capable of achieving chlorine dioxide solutions free from chlorine contamination. Residual determination procedures should be substantiated methods and should also be specific for chlorine dioxide or used in systems where no chlorine contamination is possible. Do not add ZYDOX AD-05 directly to process water.

APPLICATIONS

POTABLE WATER AND WASTE TREATMENT DISINFECTION

For most municipal and other potable water systems, a chlorine dioxide residual concentration up to 2.0 ppm is sufficient to provide adequate disinfection. The concentration of total residual oxidants (chlorine dioxide, chlorite and other chlorate) should be monitored such that it does not exceed 1.0 ppm in the distribution system. For wastewater and sewage applications, residual chlorine dioxide concentrations up to 5.0 ppm are generally adequate.

Sanitization of Food-Contact Surfaces:

ZYDOX AD-05 in combination with FOAM ADD 10 to generate a chlorine dioxide containing foam solution for use as a terminal no-rinse sanitizer for food-contact surfaces, food-processing equipment and utensils.

Prior to application of the sanitizing foam, remove gross food particles and soil by a pre-flush, or pre-rinse, and when necessary, pre-soak treatment. Then thoroughly wash all equipment, surfaces and utensils with a suitable detergent or cleaner, following by a potable water rinse.

Application of the foam sanitizing solution can be accomplished by manually combining 15 oz. of FOAM ADD 10 with 2.5 oz. of ZYDOX AD-05, gently mixing for ten minutes and then immediately diluting with water to ten gallons. Alternatively, use the *Rio Linda Chemical Potable Foamer* or a centrally located installed system to mix the components, at the use levels noted above.

Cover the entire area being treated with the foam sanitizer to a depth of 1/4 - 1". A contact time of at least one minute is required for sanitization. Allow the foam sanitizer to thoroughly drain and dry from all equipment and surfaces prior to recontact of the sanitized surface with food or feed items.

Food Processing Plants, Dairies, Bottling Plants, and Breweries

For Microbial control in typical food processing water systems, such as flume transport, chill water systems, hydrocoolers, and other water systems, apply ZYDOX AD-05 through a chlorine dioxide generation system to achieve a chlorine dioxide residual concentration ranging from 0.25 to 5.0 ppm.

Chlorine dioxide generated from **ZYDOX AD-05** may also be used as a water sanitizer for fruit and vegetable washing and cut and peeled potatoes, without a subsequent potable water rinse requirement, provided that the concentration of total residual oxidants meet the residual limitations of ≤ 1.0 ppm.

Residual concentrations up to 5.0 ppm chlorine dioxide in process water may be used for washing whole uncut and unpeeled fruits and vegetables although a final potable water rinse is required if the residual exceeds 1.0 ppm.

Potatoes, including those which have been peeled or cut, may be treated with sufficient chlorine dioxide to produce a residual concentration of up to 5.0 ppm provided this is followed by a potable water rinse.

Consult your authorized **ZYCHEM TECHNOLOGIES** representative for assistance in determining the correct dosage for this application.

Poultry Processing Water

Use **ZYDOX AD-05** to generate chlorine dioxide for use as an antimicrobial agent in water used in poultry processing in an amount not to exceed 3.0 ppm residual chlorine dioxide as determined by an appropriate method.

Aqueous Disinfection Systems for CIP Cleaning:

Use **ZYDOX AD-05** to generate chlorine dioxide for disinfecting aqueous CIP cleaning systems. If the concentration of chlorine dioxide generated from **ZYDOX AD-05** exceeds 5.0 ppm, a potable water rinse should follow treatment. Care should be taken to ensure the biological and chemical quality of the potable water.

General Industrial Process Water Treatment (Oilfield Injection Water, Aqueous Stimulation Systems, White Water Paper Mill Systems, and Recirculating Cooling Towers:

For control of microbial slimes, these systems will require a chlorine dioxide residual concentration ranging between 0.25 and 5.0 ppm. The **ZYDOX AD-05** dosage needed to achieve these levels will vary widely depending on the exact application. Please contact your authorized **ZYCHEM Technologies** representative for assistance in determining the correct dosage level.

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STORAGE AND DISPOSAL

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

Storage: Store this product in a cool, dry area, away from direct sunlight and heat to avoid deterioration. In case of spill, flood the area with large quantities of water.

Pesticide Wastes: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container Disposal: Triple rinse (or equivalent) all containers and offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

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