PM21 3008-71 8-27-96 1/3

OSMOSE

ACCEPTED 8-27-96 Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 3008-71

BARDEC PART 3

FOR MANUFACTURING BARDEC WOOD PRESERVATIVE ONLY

ACTIVE INGREDIENT	
Zinc Oxide	99%
INERT INGREDIENTS	1%

KEEP OUT OF REACH OF CHILDREN

CAUTION

STATEMENT OF PRACTICAL TREATMENT

If in EYES: Flush with plenty of water. Get medical attention if irritation persists.

If on SKIN: Wash with plenty of soap and water. Get medical attention if irritation persists.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Caution: Causes eye irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling. In case of contact, immediately flush skin or eyes with plenty of water. If irritation develops, get medical attention.

ENVIRONMENTAL HAZARDS

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.
Sold only for use in formulating BARDEC solution for pressure treating wood products. The BARDEC wood preservative is designed for the pressure impregnation of wood to provide protection against decay, termites and marine borers (Limnoria and Teredo). Use with caution strictly in accordance with manufacturer's instructions. More detailed instructions for use are included in the technical bulletin.

STORAGE AND DISPOSAL

1. STORAGE
   Protect from precipitation.
2. PROHIBITIONS
   Do not contaminate water, food or feed by storage or disposal. Open dumping is prohibited.
3. PESTICIDE DISPOSAL
   Pesticide, spray mixture, or rinse water that cannot be used according to label instructions must be disposed of according to applicable Federal, State or local procedures.
4. CONTAINER DISPOSAL
   Triple rinse (or equivalent). Then offer for recycling or reconditioning, or reconditioning, or puncture and dispose of in a sanitary landfill or by other approved state and local procedures.

Manufactured For:
Osmose Wood Preserving, Inc.
980 Ellicott Street
Buffalo, NY 14209

EPA Reg. NO. 3008-xx **EPA Est. No. 26883**

NET CONTENTS: _____

OSMOSE

BARDEC TECHNICAL BULLETIN

BARDEC PART 3 is a component of BARDEC wood preservatives for pressure treatment. When mixed in accordance with the detailed instructions provided by Osmose Wood Preserving, Inc. BARDEC wood preservatives conform with AWPA specifications P5(3) - 95.

RECOMMENDATIONS FOR USE:

BARDEC PART 3 is zinc oxide. It is intended to be mixed with other components to formulate BARDEC wood preservative solutions for use in pressure treatment. The mixing instructions must be followed carefully to ensure that the treatment solution conforms with AWPA specification P5(3)-95. Further information and assistance in solving particular problems is available from Osmose Wood Preserving, Inc. BARDEC wood preservative should be used in accordance with the AWPA standards. Wood products treated with BARDEC in accordance with AWPA standards should be handled in the same manner as those treated with ACA.

TYPICAL BARDEC MIX:

4384 pounds dry oxide basis containing: 1805 pounds of BARDEC PART 1 (Arsenic Acid), 2,110 pounds of BARDEC PART 2 (Cuprous Oxide), 1100 pounds BARDEC PART 3 (Zinc Oxide).
Aqua Ammonia equivalent to 3024 pounds Anhydrous Ammonia.
2016 pounds Ammonium Bicarbonate or equivalent in Ammonia and Carbon Dioxide.

Larger or smaller mixes may be made by varying in proportion the constituent parts.

EP 1. Add Initial water to mix tank. As Aqua Ammonia concentration will affect quantities of water used, see Table 1 for initial water quantity. Turn on agitator.

STEP 2 1805 pounds of BARDEC PART 1 (Arsenic Acid 75% concentration) will be added now. The mix tank should have an Arsenic Acid addition system as shown on the attached sketches. The Arsenic Acid is pumped into the mixer, using a corrosion-resistant drum pump and Acid-resistant hose or piping. Upon emptying each drum of Arsenic Acid it should be rinsed with about eight gallons of water sprayed into and around the drums inside. This rinsate should be transferred to the mixer. Repeat this washing two more times for each drum, resulting in three complete washings of each drum. Replace the 2" diameter plugs in the drums.

NOTE: 75% Arsenic Acid is a strong Acid and should be handled with care. In handling, workers should wear rubber coats, pants, and gloves and an Acid-resistant plastic face shield.

Equivalent volume of bulk Arsenic Acid can be used if available.

STEP 3. Close the hatch and open vent line valve to the Ammonia scrubber system.

STEP 4 Add Aqua Ammonia containing about 1,840 pounds of Anhydrous Ammonia. (Approximately 850 gallons of 29% NH_4OH).

STEP 5. Add: 2,110 pounds BARDEC PART 2 (Cuprous Oxide) as supplied;
1100 lbs. BARDEC PART 3 (Zinc Oxide) as supplied;
2016 lbs. Ammonium Bicarbonate (if used as powder).

STEP 6 Agitate mix while sparging with air, noting temperature increase for two hours.

STEP 7 Add final Aqua-Ammonia as shown in Table I and continue agitation until temperature stops rising.

STEP 8 Withdraw a sample from the mix tank toward the end of the Step 7 agitation period. Allow the sample to settle for a few minutes and note if any metallic Copper is visible in the settlings. If there is, continue agitation with periodic samplings until no metallic copper is visible in the settling. When visible metallic copper is absent, test for the presence of unreacted copper by the AWPA test method. A negative test for unreacted metallic copper indicates the mix is completed.

STEP 9 Add water, if necessary, to bring product to desired concentration.

Osmose Wood Preserving, Inc., 980 Ellicott Street, Buffalo, NY 14209, Phone (716) 882-5905, Fax (716) 882-5139

Table 1

Gallons of Water and Ammonia Depending on Ammonia Concentration

Percent Ammonia	Step - 1 Water	Step - 2 Drum Wash Water	Step - 7 Final Ammonia
10	1283	48	1512
12	1584	48	1270
14	1736	48	1080
16	1886	48	966
18	1987	48	864
20	2067	48	784
22	2133	48	718
24	2188	48	662
26	2234	48	616
28	2274	48	576
30	2309	48	540

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