LORD’S ZB-SHIELD
FOR MANUFACTURING USE ONLY

ACTIVE INGREDIENT:
Zinc Borate .......... 99.8 %
Other Ingredients 0.2%
Total .................. 100.0%

KEEP OUT OF REACH OF CHILDREN

CAUTION
See back panel for precautionary statements
EPA Registration Number: 73032-1

For use as a Biocide (fungicide/preservative) additive in the manufacture of wood composite and wood--plastic composites.
Lord’s Additives LLC 17 Hart Lane Sewell, NJ 08080
Emergency 1- 800-645-8265

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Directions for Use
NOT FOR FOOD OR DRUG USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read Lord’s ZB-SHIELD Technical Data Sheet for formulation details.

PRECAUTIONARY STATEMENTS
Hazardous to Humans and Domestic Animals.

CAUTION: Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.

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. Call a poison control center or doctor for treatment advice.
IF ON SKIN: 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 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.
IF INHALED: Remove person to fresh air. If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

Environmental Hazards
Do not discharge effluent containing this product directly into lakes, streams, ponds, estuaries, oceans or public waters unless this product is specifically identified and addressed in a National Pollutant Discharge Elimination System (NPDES) permit. 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 Environmental Protection Agency (EPA).

Storage and Disposal
Do not contaminate water, food, or feed by storage or disposal.
PESTICIDE STORAGE: Store in a dry place. Do not store where children or animals may gain access.
PESTICIDE DISPOSAL: Wastes resulting from the use of the product may be disposed of on site or at an approved waste disposal facility. CONTAINER HANDLING: Non-refillable container. Do not reuse or refill this container. Completely empty by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment. Then dispose of liner in a sanitary landfill or by incineration if allowed by state and local authorities. If drum is contaminated and cannot be reused, dispose of in a similar manner.

Net Contents 2500 lb (1134 Kg)
Lord’s ZB-SHIELD
TECHNICAL DATA SHEET
EPA Registration # 73032-1

Attributes

Lord’s ZB-SHIELD is a free flowing, readily dispersible, bright white powder, which does not detract from bright colors or pure whites. Its optimum performance is as a corrosion inhibitor and biocide (in-can preservative and fungicide) is obtained when Lord’s ZB-SHIELD is uniformly dispersed in coatings. Therefore, it should be incorporated during the pigment dispersion cycle in the coating preparation process.

Lord’s ZB-SHIELD is almost insoluble in water at 20°C (< 0.3%) and is leach resistant. It is chemically stable up to 290 °C and therefore can withstand processing temperatures below that value. It contains no organic components and as a powder requires no organic solvents.

Fungicide Applications
Wood and Wood-Plastic Composites

Lord’s ZB-SHIELD provides protection from wood destroying fungus for wood composite products used in above ground applications (UC1, UC2, UC3A). Typical applications include decay resistant siding, roofing and external trim. Wood composites treated with Lord’s ZB-SHIELD are not suitable for ground contact and must be protected with a water repellent coating when used in exterior applications. When Lord’s ZB-SHIELD is used in wood composites it should be uniformly distributed throughout the product to provide its most efficient use. Lord’s ZB-SHIELD at a retention of 0.75% (w/w) provides protection against fungal decay. This data is intended to serve only as a guideline and the wood composite manufacturer must determine the Lord’s ZB-SHIELD loading for their treated product and its end use application. For wood composite loading in excess of 1.5% (w/w) it may be necessary to use additional adhesive binder to compensate for possible effects on strength.

Lord’s ZB-SHIELD can also be used is wood plastic composites to protect the wood component of the product. It has also been shown to provide resistance to the growth of molds on the surface of these products at loading of 2 to 3 percent. The ability of both wood composites and wood plastic composites to resist decay and mold organisms is dependent on the wood type, plastic type, method of production, other additives employed, exposure conditions and the amount of preservative employed.
Lord's ZB-SHIELD
TECHNICAL DATA SHEET

PRODUCT DESCRIPTION

FORMULA: $2\text{ZnO} \cdot 3\text{B}_2\text{O}_3 \cdot 3.5\text{H}_2\text{O}$

% ZnO (theoretical) 38.2%
% B$_2$O$_3$ (theoretical) 48.2%
% H$_2$O (theoretical) 13.6%

EPA Registration No. 73032-1

CAS #: 12447-61-9 TSCA # 1332-07-6

FORMULA WEIGHT ....................... 434.66

APPEARANCE: White Powder (No Odor)

PARTICLE SIZE (laser)

Ave. 9 to 13 microns (Regular Particle Size)
Ave 3.5 to 5 microns (Fine Particle Size)

CRYSTAL DENSITY ..................... 2.79 g/cm$^3$

BULK DENSITY (loose pack, typical) 30 to 50 lb/ft$^3$

SOLUBILITY: Less than 0.3 wt. % in water at room temp. Lord's ZB-SHIELD can be hydrolyzed by strong acids and bases.

Moisture Content (Free H$_2$O) 1% max

CONTAINERS:

Multi-wall paper bags with a polyethylene moisture-resistant film barrier, 25 kg (55.1 lbs) and 2500 polyethylene “supersacks” (1134kg) net

WARNING: ON ALL PRODUCTS, AVOID PROLONGED INHALATION OR PROLONGED SKIN CONTACT. NOT FOR FOOD OR DRUG USE. READ MATERIAL SAFETY DATA SHEETS AND ALL INSTRUCTIONS RELATING TO THE PRODUCT BEFORE USE.

NOTICE: THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED INCLUDING ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, WHICH EXTEND BEYOND THE DESCRIBED USES IN THIS BULLETIN.

If possible uses of this product have been mentioned herein, it is not intended that the above products be used to practice any applicable patent, whether mentioned in this Bulletin, or not, without procurement of a license, if necessary, from the owner, following investigation by the user. Nor is it intended, or recommended that the products be used for any such described purposes without verification of their safety and efficacy for such purposes.

Our recommendation for use of this product is based on data believed to be reliable. The use of this product being, beyond the control of the manufacturer, no guarantee, expressed or implied, is made as to the effects of such or the result to be obtained if not used in accordance with directions or established safe practice. The buyer must assume all responsibility, including injury or damage, resulting from its misuse as such, or in combination with other materials.
Notice: There are no warranties, express or implied including any warranty of fitness for a particular purpose, which extend beyond the described uses in this bulletin.

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HAZARDS TO HUMANS AND DOMESTIC ANIMALS
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