

MATERIAL SAFETY DATA SHEET

November 4, 2005

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: Copper Azole Treated Wood

General Use: Treated Wood Products

Synonyms: Copper Azole Treated Wood with Water Repellant, Copper Azole Treated Wood with Mold Inhibitor, Copper Azole Treated Formaldehyde Bonded Wood Products.

MANUFACTURER:

United Wood Preserving, LLC
338 E. Washington Ave., Ste D
Muscle Shoals, AL 35661

TELEPHONE NUMBERS:

256-248-0944

2. COMPOSITION / INFORMATION ON INGREDIENTS

| HAZARDOUS INGREDIENTS | PERCENT ¹ | CAS # | EXPOSURE LIMITS (mg/m ³) | | |
|--|----------------------|-------------|--|------------------------------------|------------|
| | | | OSHA-PEL | ACGIH-TLV | ACGIH-STEL |
| Basic Copper Carbonate or Copper Oxide (Both as Cu) (Dust/Mist) | <3 | 7440-50-8 | 1.0 | 1.0 | None |
| Tebuconazole | <1 | 107534-96-3 | None | None | None |
| Ethanolamine | <1 | 141-43-5 | 6.0 | 7.5 | 15 |
| Wood Dust ² Western Red Cedar All other Species | >95 | N/A | 15(total) 5.0 (respirable) 15(total) 5.0 (respirable) | 0.5 (inhalable) 1.0 (inhalable) | None |
| Formaldehyde ³ | <0.1 | 50-00-0 | 0.75ppm | 0.37 (Ceiling) | 2ppm |
| Ammonia ⁴ | <1 | 7664-41-7 | 50ppm | 25ppm | 35ppm |

Notes: ¹ Actual retention may vary due to differences in wood stock and treatment retention levels.

² A state-run OSHA program may have more stringent limits for wood dust and/or PNOR.

³ Only applies to Plywood Products

⁴ Only applies to wood sold in the West Coast and Canadian regions. Ammonia added at 1% to treating solution at local treating facility.

3. HAZARDS IDENTIFICATION

Inhalation: Airborne treated or untreated wood dust may cause nose, throat or lung irritation. Various species of untreated wood dust can elicit allergic respiratory response in sensitized persons.

Eye Contact: Treated or untreated wood dust may cause mechanical irritation.

Skin Contact: Handling wood may result in skin exposure to splinters. Prolonged and/or repeated contact with treated or untreated wood dust may result in mild irritation. Various species of untreated wood dust can elicit allergic type skin irritation in sensitized persons.

Ingestion: Not anticipated to occur.

Chronic Wood Dust (treated or untreated) Effects: Wood dust, depending on species, may cause dermatitis on prolonged, repetitive contact; may cause sensitization and/or irritation.

4. FIRST AID MEASURES

Inhalation: Remove from wood dust exposure. If breathing has stopped administer artificial respiration. Seek medical aid if symptoms persist.

Eye Contact: Gently flush any particles from the eyes with large amounts of water for at least 15 minutes. DO NOT RUB THE EYES. Seek medical aid if irritation persists.

Skin Contact: Rinse wood dust off with water. DO NOT RUB. Once the skin is free of the wood dust, wash thoroughly with soap and water. Seek medical aid if severe irritation develops.

Ingestion: Rinse the victim's mouth out with water. Do not induce vomiting. If symptoms develop, call a physician.

5. FIRE FIGHTING MEASURES

| | | | |
|----------------------|----|------------------------------|----|
| Flash Point | NA | Lower Explosive Limit | NA |
| Auto-ignition | NA | Upper Explosive Limit | NA |

Extinguishing Agents: Not applicable

Fire-Fighting Procedures: Fire from a separate fuel source may be intense enough to cause thermal decomposition releasing toxic fumes and/or gases. Wear complete fire service protective equipment, including full-face NIOSH and NFPA – approved self-containing breathing apparatus.

Fire and Explosion Hazard: High airborne levels of wood dust may burn rapidly in the air when exposed to an ignition source.

6. ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures: Not applicable.

Waste Disposal: See Section 13.

7. HANDLING AND STORAGE

Storage Conditions: Protect from physical damage. Maintain good housekeeping.

Caution: DO NOT BURN TREATED WOOD. Do not use pressure treated chips or sawdust as mulch. Whenever possible, sawing or machining treated or untreated wood should be performed outdoors to avoid accumulations of airborne wood dust. Wash hands thoroughly before eating, drinking, using tobacco products, and/or using restrooms.

NOTE: For plywood products only, provide adequate ventilation to reduce the possible buildup of formaldehyde vapors.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Respiratory Protection: None normally required. When sawing or cutting treated or untreated wood, wear a NIOSH approved N95 or better dust mask.

Eye Protection: Wear safety glasses with side shields or safety goggles when sawing or cutting.

Skin/Foot Protection: Leather or comparable gloves to prevent splinters. Long sleeve shirt, pants and steel toed shoes when handling treated or untreated wood.

Ventilation: Saw, cut or machine wood outdoors or in well ventilated areas. Ventilation should be sufficient to maintain inhalation exposures below OSHA PEL for particulates.

Other Protective Equipment: Wear ear plugs or muffs when using power tools.

NOTE: For plywood products only, if Formaldehyde vapor level exceeds OSHA PEL or STEL, then a NIOSH approved respirator is required.

9. PHYSICAL AND CHEMICAL PROPERTIES

| | | | |
|----------------------------|----------------------|------------------------------------|----|
| Appearance | Light Brown to Green | Specific Gravity (Water =1) | NA |
| Odor | None | Boiling Point | NA |
| Solubility in Water | NA | Vapor Density (Air=1) | NA |
| Physical State | Solid | Vapor Pressure | NA |
| pH | NA | Freezing Point | NA |

10. STABILITY AND REACTIVITY

Conditions contributing to instability: None known.

Incompatibilities: Strong acids, open flame and oxidizers.

Hazardous Reactions/Decomposition/Combustion Products: Combustion products may include smoke, toxic fumes or gases.

Hazardous Polymerization: Does not occur.

11. TOXICOLOGICAL INFORMATION

Carcinogenicity Data: IARC has classified untreated hardwood and hardwood/softwood mix wood dust as a Group I human carcinogen. The wood dust classification is based primarily on IARC's evaluation of increased risk in the occurrence of adenocarcinomas of the nasal cavities and paranasal sinuses associated with occupational exposures to untreated wood dust. NTP has classified all untreated wood dust as a carcinogen.

A human health risk assessment has been conducted in accordance with U.S. Environmental Protection Agency (EPA) risk assessment guidance in order to evaluate human health risks associated with exposures to Copper Azole Type B (CA-B) treated wood. Four different scenarios, including occupational (adult builders), resident handler (adult female), subchronic (child) and chronic (child to adult) residential, and playground (child and teenager) were evaluated. Exposures evaluated in the risk assessment include incidental ingestion and dermal contact with dislodgeable residue from the surface of CA-B treated wood and soil impacted with tebuconazole (TEB) and copper, inhalation of sawdust from CA-B treated wood, and inhalation of re-suspended soil particulate. Non-cancer health risks are expressed as margin of exposure (MOE), which is a ratio of the no observed effect level (NOEL) or the lowest observed effect level (LOEL) for a constituent, to an estimated exposure level for the constituent. The greater the MOE, the less likely that exposure to the constituent will pose a potential health risk. Based on the evaluation, the lowest MOE of 170 is for incidental ingestion of copper in the soil for the child resident (ages 1-6 years). Based on EPA guidance, an MOE of 10 is the benchmark for this exposure route. Thus, no adverse health effects are expected. Most of the MOEs calculated in the risk assessment are greater than 1,000, and therefore, none of the exposures to TEB or copper evaluated pose a potential health risk. Cancer risks were not assessed because according to EPA, neither TEB nor copper is a known or probable carcinogen.

12. ECOLOGICAL INFORMATION

Copper Azole treated wood leaching studies were conducted for 30.5 days on commodity size products in dynamic test cylinders using diluent water at nominal temperatures of 5, 15, and 25 degrees C and pH of 5.5, 7.0 and 8.5. Samples collected on days 1.5, 2.5, 4.5, 7.5, 10.5, 15.5, 22.5, and 30.5 were analyzed for total copper and tebuconazole (TEB). The treated wood was then leached for an additional 307.6 to 386.8 days in an experimental pond to confirm long term preservative loss rates. A suite of bioassays were conducted on day 0.5 effluent. Copper and TEB loss rates declined exponentially with time and appeared to reach steady state losses at the end of about week 3. Predictive equations describing these loss rates, for use in developing a risk assessment model, were developed using non-linear regression analysis. Bioassay results indicated that environmental risks associated with CA-B preserved wood can be evaluated solely on copper predictions and water quality criteria for copper. The TEB did not add to the toxicity of the effluent. In fact, it appears that the increased dissolved organic carbon associated with TEB and wood extractives reduced the copper's toxicity in the effluent. These studies were conducted at dilution water flow rates much lower than could be anticipated in open aquatic environments. Dilution factors in very slow flowing streams or lakes, where current speeds might be as low as 1.0 cm/sec, are 468 times higher than the flows created in these tests.

Preliminary modeling indicates that a pier sitting on 25 CA-B treated piling in freshwater flowing at a very low current speed of 2.0cm/sec (typical of many small lakes) would increase the copper concentrations by 0.28 µg Cu/L at pH 6.5. This suggests that CA-B preserved piling can be used in most surface waters that do not closely approach or exceed EPA water quality criteria. However, the models will provide a basis for conducting site specific risk assessments where large volumes of treated wood are proposed for immersion in poorly circulating bodies of water.

13. DISPOSAL CONSIDERATIONS

Disposal Guidance: DO NOT BURN TREATED WOOD. Do not use pressure treated chips or sawdust as mulch. Dispose of in accordance with local, state and federal regulations. Under RCRA, it is the responsibility of the user of the product to determine at the time of disposal, whether the product meets RCRA criteria for hazardous waste. This product is typically not considered a hazardous waste but State run waste programs may be more stringent. Check with your local or state regulators prior to disposal.

14. TRANSPORT INFORMATION

DOT Hazardous Material Classification: This material is not regulated as a hazardous material by the DOT.

15. REGULATORY INFORMATION

OSHA (29 CFR 1910.1200): This product is regulated under the Hazard Communication Standard.

RCRA (40 CFR 261): DO NOT BURN TREATED WOOD. Do not use pressure treated chips or sawdust as mulch. Dispose of in accordance with local, state and federal regulations. Under RCRA, it is the responsibility of the user of the product to determine at the time of disposal, whether the product meets RCRA criteria for hazardous waste. This product is typically not considered a hazardous waste but State run waste programs may be more stringent. Check with your local or state regulators prior to disposal.

SARA 313 (40 CFR 372): Unless exempted, this product may require a Toxic Release Inventory reporting for individual material uses of 25,000 pounds or more. Reporting is under Copper Compounds. It is the user's responsibility to determine applicability of reporting requirements and exemptions.

California Proposition 65: No

ABBREVIATIONS

| | | | |
|---------------|---|--------------|---|
| OSHA | Occupational Safety and Health Administration | TLV | Threshold Limit Value |
| NFPA | National Fire Protection Association | STEL | Short-Term Exposure Limit |
| FIFRA | Federal Insecticide, Fungicide and Rodenticide Act | RCRA | Resource Conservation and Recovery Act |
| CERCLA | Comprehensive Environmental Response, Compensation, and Liability Act | ACGIH | American Conference of Governmental Industrial Hygienists |
| SARA | Superfund Authorization and Reauthorization Act | NIOSH | National Institute of Occupational Safety and Health |
| PEL | Permissible Exposure Limit | TSCA | Toxic Substances Control Act |
| DOT | Department of Transportation | IARC | International Agency for Research on Cancer |
| NTP | National Toxicology Program | IBC | International Building Code |
| CFR | Code of Federal Regulations | mg/m3 | Milligrams per cubic meter |
| CWA | Clean Water Act | CAA | Clean Air Act |
| CAS | Chemical Abstracts Service | | |

NOTICE: While the information and recommendations set forth herein are believed to be accurate as of the date hereof this company makes no guarantee or warranty, expressed or implied, as to the accuracy, reliability, or completeness of the information.