



**MATERIAL SAFETY  
DATA SHEET**

**PRODUCT: UF BONDED WOOD PRODUCTS**

**Effective Date: 05/10/2004**

**\*\*\* Section 1 – Chemical Product and Company Identification \*\*\***

**Product Names:**

**UREA-FORMALDEHYDE BONDED WOOD PRODUCTS**

Hardwood Plywood – Domestic/Import, Overlay, Varying Cores

**Product Use:**

Wood particles and fibers bonded together with UF resin and used in both commercial and industrial settings.

**DISTRIBUTOR:**

The Marwin Company, Inc.  
P.O. Box 9126  
Columbia, SC 29290

803-776-2396

**\*\*\* Section 2 – Composition / Information on Ingredients \*\*\***

#	Component	Percent	OSHA PEL	ACGIH TLV
		50-00-0 Formaldehyde	ppm TWA 2 ppm STEL	
Not Applicable	Hardwoods		5 mg/m <sup>3</sup> TWA 10 mg/m <sup>3</sup> STEL	1 mg/m <sup>3</sup> TWA
Not Applicable	Softwoods		5 mg/m <sup>3</sup> TWA 10 mg/m <sup>3</sup> STEL	5 mg/m <sup>3</sup> TWA 10 mg/m <sup>3</sup> STEL
Not Applicable	Western Red Cedar		2.5 mg/m <sup>3</sup> TWA	1 mg/m <sup>3</sup> TWA

The exposure limits were vacated in 1992; the present exposure limits governing wood dust are 15 mg/m<sup>3</sup> (Total Dust) and 5 mg/m<sup>3</sup> (Respirable Fraction)

**\* \* \* Section 3 – Hazards Identification \* \* \***

**Emergency Overview**

CAUTION! Sawing, sanding or machining wood products may produce wood dust, which cause an explosion hazard. This product may release small quantities of formaldehyde in gaseous form. Emissions decrease through time as the board ages. Formaldehyde and/or wood dust may cause irritation to the eye, skin and respiratory tract.

**Target Organ:**

Eye, Skin and Respiratory Tract.

**Description:**

Boards manufactured from wood particles, fibers, wood piles, wood veneers and other products bonded to wood face veneers using urea-formaldehyde resin.

**Potential Health Effects**

**Potential Health Effects: Inhalation**

Wood dust may cause nasal dryness, irritation, coughing and sinusitis. Repeated exposures can produce allergic responses in some sensitive individuals. Gaseous formaldehyde may cause temporary irritation to the nose and throat.

**Potential Health Effects: Eyes**

Wood dust can cause mechanical irritation. Gaseous formaldehyde may cause temporary irritation to the eyes.

**Potential Health Effects: Skin**

Both formaldehyde and various species of wood dust may evoke allergic contact dermatitis in sensitized individuals. If an allergy pre-exists or develops, it may be necessary to remove the sensitized worker from further exposure to wood dust or wood-based products.

**Potential Health Effects: Ingestion**

Not applicable under normal conditions of use.

**Medical Conditions Aggravated**

Wood dust exposure may aggravate pre-existing skin, eye, respiratory and cardiovascular disorders.

**HMIS Ratings: Health: 1 Fire: 1 Reactivity: 0**

Hazard Scale: 0 = Minimal, 1 = Slight, 2 = Moderate, 3 = Serious, 4\* = Chronic

**\*\*\* Section 4 – First Aid Measures \*\*\***

**First Aid: Inhalation**

Remove to fresh air immediately. If breathing is difficult, trained personnel should administer oxygen. If breathing has ceased apply artificial resuscitation using oxygen and a suitable mechanical device such as a bag and a mask. Get immediate medical attention.

**First Aid: Eyes**

Immediately rinse with water. Remove contact lenses. Hold eyelids apart and flush eyes with water at least 15 minutes. If irritation persists, seek medical attention.

**First Aid: Skin**

Wash affected areas with soap and water until dust is entirely removed from skin. Immediately remove contaminated clothing. If rash, dermatitis or irritation persists, seek medical attention. Launder contaminated clothing before reuse or dispose of properly.

**First Aid: Ingestion**

Not applicable under normal conditions of use.

**\*\*\* Section 5 – Fire Fighting Measures \*\*\***

**Flash Point:**

Not applicable.

**Explosive Limits:**

Sawing, sanding or machining wood products can produce wood dust as a by-product. Wood dust is a strong severe explosion hazard if a dust "cloud" contacts an ignition source. 212°F (100°C) has been suggested as the upper temperature limit for continuous exposure for wood without risk of ignition (wood dust may require a still lower temperature). An airborne concentration of 40 grams of dust per cubic meter of air is often used as the lowest explosion limit (LEL) for wood dust.

**Hazardous Combustion Products:**

Thermal-oxidative degradation, or burning, of wood can produce irritating and potentially toxic fumes and gases including carbon monoxide, aldehydes and organic acids.

**Autoignition Temperature:**

400°-500°F (204°-260°C)

**Fire Extinguishing Media**

Water, carbon dioxide or sand

**Special Fire Fighting Procedure:**

Use water to wet down wood dust to reduce the likelihood of ignition or dispersion of dust into the air. Remove burned, charred or wet dust to open, secure area after fire is extinguished.

**HFPA Ratings: Health: 1 Fire: 1 Reactivity: 0**

Hazard Scale: 0 = Minimal, 1 = Slight, 2 = Moderate, 3 = Serious, 4\*

**\*\*\* Section 6 – Accidental Release Measures \*\*\***

**Accidental Release:**

Not applicable for product in purchased form.

**Clean-Up Procedures:**

Wood dust may be vacuumed or shoveled for recovery or disposal. Wet down accumulated dusts prior to vacuuming or shoveling in order to prevent explosion hazards. Avoid dusty conditions and provide good ventilation. Wood dust clean up and disposal activities should be accomplished in a manner to minimize creation of airborne dust. Do not inhale dusts during clean up.

**\*\*\* Section 7 - Handling and Storage \*\*\***

**Handling Procedures**

Avoid repeated or prolonged breathing of wood dust. Avoid eye contact or repeated or prolonged contact with skin. Change protective clothing and gloves when sign of contamination appear. Provide adequate ventilation to reduce the possible build up of formaldehyde gas, particularly when high temperatures occur.

**Storage Procedures**

UF bonded wood products should not be stored where exposure to water could occur. Wood products are combustible and, therefore, should not be subjected to temperatures exceeding the autoignition temperature. Water spray may be used to wet down wood dust generated by sawing, sanding or machining to reduce the likelihood of ignition or dispersion of dust into the air.

**\*\*\* Section 8 – Exposure Controls / Personal Protection \*\*\***

**Engineering Controls**

Due to the explosive potential of wood dust when suspended in air, precautions should be taken during sanding, sawing or machining of wood products to prevent sparks or other ignition sources in ventilation equipment. Use of totally enclosed motors is recommended. Provide local exhaust as necessary to meet OSHA requirements for wood dust exposure.

### **PERSONAL PROTECTIVE EQUIPMENT (PPE)**

(PPE RECOMMENDED BELOW: IT MAY BE NECESSARY TO FOLLOW PPE REQUIREMENTS AS DETERMINED BY YOUR WORKPLACE)

#### **Personal Protective Equipment: Respiratory**

Use NIOSH/OSHA approved respirator when ventilation is not possible and if permissible exposure limits to wood dust may be exceeded.

#### **Personal Protective Equipment: Eyes/Face**

Recommend goggles or safety glasses as conditions indicate when sawing, sanding or machining wood products.

#### **Personal Protective Equipment: Skin**

Protective equipment such as gloves and outer garments may be needed to reduce skin contact. After working with the wood and before eating, drinking, tolieting and use of tobacco products, wash exposed areas thoroughly.

#### **Other Protective Clothing or Equipment:**

No special requirements under normal conditions of use. Protective clothing should be worn where prolonged skin contact may occur. Protective clothing should be laundered separately from household clothing and before reuse.

### **\*\*\* Section 9 – Physical & Chemical Properties \*\*\***

**Appearance:** Varies  
**Physical State:** Solid  
**Vapor Pressure:** Not applicable  
**Boiling Point:** Not applicable  
**Solubility (H<sub>2</sub>O):** Insoluble

**Odor:** Wood species dependent  
**PH:** Not applicable  
**Vapor Density:** Not applicable  
**Melting Point:** Not applicable  
**Specific Gravity:** <1.0

### **\*\*\* Section 10 – Chemical Stability & Reactivity Information \*\*\***

#### **Chemical Stability**

This is a stable material.

#### **Chemical Stability: Conditions to Avoid**

Wood dust generated from sawing, sanding or machining the product is extremely combustible. Keep in cool dry place away from ignition sources.

#### **Incompatibility**

Oxidizing agents and drying oils.

#### **Hazardous Combustion Products:**

Thermal-oxidative degradation, or burning, of wood can produce irritating and potentially toxic fumes and gases including carbon monoxide, aldehydes and organic acids.

#### **Hazardous Polymerization**

Will not occur.

**\*\*\* Section 11 – Toxicological Information \*\*\***

**WOOD DUST:**

Wood dust generated from sawing, sanding or machining this product may cause nasal dryness, irritation, coughing and sinusitis. The International Agency for Research on Cancer (IARC) and the National Toxicology Program (NTP) classify wood dust as a (known) human carcinogen (Group I). This classification is based primarily on increased risk in the occurrence of adenocarcinomas of the nasal cavities and paranasal sinuses associated with exposure to wood dust. The evaluation did not find sufficient evidence to associate cancers of the oropharynx, hypopharynx, lung, lymphatic and hematopoietic systems, stomach, colon or rectum with exposure to wood dust.

**FORMALDEHYDE:**

Exposure to gaseous formaldehyde may cause temporary irritation to the nose, throat as well as lead to respiratory disorders. However, in a thorough review of sensory/respiratory irritation studies of formaldehyde from the standpoint of occupational exposure, an expert panel has observed exposure up to concentrations of 0.3 ppm failed to produce irritation. With regard to the respiratory disorders, studies have concluded the threshold for long-term chronic pulmonary effects is between 0.4 and 3 ppm and for chronic obstructive pulmonary disease is 2 ppm. Pre-existing respiratory disorders may be aggravated by exposure.

Epidemiology studies of workers exposed to formaldehyde have failed to consistently identify an association between formaldehyde exposure and cancer. In animal studies, rats and mice exposed to high levels of formaldehyde developed nasal cancer while hamsters did not. These exposure levels are far above those levels normally found in the workplace. Formaldehyde is listed by the International Agency for Research on Cancer (IARC) as a probable human carcinogen (Group 2A). The National Toxicology Program (NTP) included formaldehyde in the Annual Report on Carcinogens. OSHA regulates formaldehyde as a potential carcinogen for exposures exceeding 0.5 ppm.

**\*\*\* Section 12 – Ecological Information \*\*\***

**A: General Product Information**

This product is not expected to have ecological effects on the environment. **B.**

**Component Analysis – Ecotoxicity - Aquatic Toxicity**

Aquatic values were not found for the individual components listed in Section 2.

**Environmental Fate:**

No information available.

**\*\*\* Section 13 – Disposal Considerations \*\*\***

**US EPA Waste Number & Descriptions**

**A. General Product Information**

If the material is altered by processing, use or contamination, the waste must be tested using methods described in 40 CFR 261 to determine if it meets applicable definitions of hazardous wastes.

**B. Component Waste Numbers**

No EPA Waste Numbers are applicable for this product's components.

**Disposal Instructions:**

In its purchased form, dispose of Wood and Wood Products by ordinary trash collection. Sawdust and construction debris should be cleaned up and disposed of after construction. Incinerate or landfill in accordance with local, state and federal regulations.

**\*\*\* Section 14 – Transportation Information \*\*\***

**US DOT Information**

This material is not a DOT hazardous material.

**Canadian – Transportation of Dangerous Goods (TDG)** This product is not listed as a hazardous material.

**\*\*\* Section 15 – Regulatory Information \*\*\***

**US Federal Regulations**

**A: General Product Information**

Wood products are not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200. However, wood dust generated by sawing, sanding or machining these products may be hazardous.

**B: Component Analysis** This product in its purchased form does not contain SARA identified chemicals.

**TSCA:**

This product complies with TSCA inventory requirements.