SECTION 1: CHEMICAL PRODUCT and COMPANY IDENTIFICATION

Product Name: Urea-Formaldehyde (UF) Bonded Wood Products
Manufacturer MSDS.: 3
Distributor Name: BlueLinx Corporation
Distributor Address: 4300 Wildwood Parkway
Atlanta, GA 30339-8401
(888) 602-BLUE (2583) MSDS Request

CHEMTREC Numbers:
For emergencies in the US, call CHEMTREC: 800-424-9300

Revision Date: 9/6/2006
Supersedes: 5/10/2004

Trade Names:
- Hardwood Plywood - Domestic/Import, Overlay, Varying Cores
- High Pressure Laminate
- Medium Density Fiberboard (MDF) - Paneling, Overlay
- Particleboard (PB) - Door Core, Industrial, Mobile Home
- Decking, Overlay, Underlayment
- Plywood Paneling

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

HMIS/NFPA Ratings:
- HEALTH: 1
- FIRE: 1
- REACTIVITY: 0
- PPE: To Top of page

SECTION 2: COMPOSITION, INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient Name</th>
<th>CAS#</th>
<th>Ingredient Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formaldehyde</td>
<td>50-00-0</td>
<td>&lt; 0.3%</td>
</tr>
<tr>
<td>Wood mixture</td>
<td>1</td>
<td>90-100%</td>
</tr>
</tbody>
</table>

See Section 8 for exposure limits.

Some UF-bonded wood products contain cured binders, fillers and other non-hazardous ingredients.

SECTION 3: HAZARDS IDENTIFICATION

Emergency Overview: CAUTION! Sawing, sanding or machining wood products may produce wood dust, which cause a fire and explosion hazard. Wood dust may cause irritation to the eyes, skin and respiratory tract. Prolonged overexposure to wood dust may cause nasal cancer. Repeated exposure to certain types of wood dust (such as western red cedar) may cause allergic skin and respiratory reaction (sensitization). These products may release small quantities of formaldehyde in gaseous form. Emissions decrease through time as the board ages. Exposure to formaldehyde gas may cause eye, skin and respiratory irritation and may cause allergic sensitization in some individuals. Prolonged exposure to formaldehyde may cause nasal cancer.
Description: Boards manufactured from wood particles, fibers, wood piles, wood veneers and other products bonded to wood face veneers using urea-formaldehyde resin.

**Applies to All Ingredients:**

**Potential Health Effects:**

**Eye Contact:** Wood dust can cause mechanical irritation. Formaldehyde gas may cause eye irritation.

**Skin Contact:** Both formaldehyde and some 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.

**Inhalation:** Wood dust may cause nasal dryness, irritation, coughing and sinusitis. Repeated exposures to certain types of wood dust (such as western red cedar) can produce allergic responses in some 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. Prolonged overexposure to wood dust is associated with an increased risk of cancer of the nasal cavity. Exposure to formaldehyde gas may cause eye, mucous membrane and respiratory tract irritation. Repeated exposures may cause allergic skin and respiratory sensitization (asthma) in some individuals.

**Ingestion:** Not applicable under normal conditions of use.

**Target Organs:** Eye, Skin and Respiratory Tract.

**Aggravation of Pre-Existing Conditions:** Wood dust and formaldehyde 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 = Severe, * =Chronic Health Hazard

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**SECTION 4 : FIRST AID MEASURES**

**Eye Contact:** Immediately rinse with water. Remove contact lenses. Hold eyelids apart and flush eyes thoroughly with water. If irritation persists or for foreign body in the eye, seek medical attention.

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

**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.

**Ingestion:** Not applicable under normal conditions of use.

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**SECTION 5 : FIRE FIGHTING MEASURES**

**Explosion:** Explosive Limits: Sawing, sanding or machining wood products can produce wood dust as a by-product. Wood dust is a strong to 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.

**Flash Point:** Not applicable.

**Auto Ignition Temperature:** 400 deg - 500 deg F (204 deg -260 deg C)

**Extinguishing Media:** Water, dry chemical and other agents rated for a Type A fire.

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

**Fire Fighting Instructions:** 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.

**NFPA**

Health: 1

Flammability: 1
SECTION 6 : ACCIDENTAL RELEASE MEASURES

Personal Precautions: Wear appropriate protective clothing and equipment of indicated in Section 8. Do not inhale dusts during clean-up. Avoid eye contact or repeated or prolonged contact with skin.

Spill Cleanup Measures: 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. Eliminate all ignition sources. 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.

SECTION 7 : HANDLING and STORAGE

Handling: 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. 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. Provide adequate ventilation to reduce the possible build up of formaldehyde gas, particularly when high temperatures occur. Formaldehyde is regulated under a specific OSHA standard, 29CFR 1910.1048. Refer to the standard for specific requirements.

Storage: UF bonded wood products should not be stored were exposure to water could occur. Wood products are combustible and, therefore, should not be subjected to temperatures exceeding the autoignition temperature.

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 maintain exposure levels below the occupational exposure limits.

Personal Protective Equipment Routine Handling: (GENERAL PPE RECOMMENDED BELOW: IT MAY BE NECESSARY TO FOLLOW SPECIFIC PPE REQUIREMENTS AS DETERMINED BY YOUR WORKPLACE)

Skin Protection Description: Protective equipment such as gloves and outer garments may be needed to reduce skin contact. After working with wood and before eating, drinking, toileting and use of tobacco products, wash exposed areas thoroughly with soap and water.

Eye/Face Protection: Safety goggles or safety glasses recommended as conditions indicate when sawing, sanding or machining wood products.

Protective Clothing/Body Protection: 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.

Respiratory Protection: Use NIOSH/OSHA approved respirator when ventilation is not possible and if occupational exposure limits may be exceeded. Formaldehyde is regulated under a specific OSHA standard, 29CFR 1910.1048. Refer to the standard for specific respiratory protection requirements.

Exposure Limits:

Wood Species: Western Red Cedar
CAS NO.: Mixture
OSHA PEL: 5 mg/m3 TWA (respirable dust)
15 mg/m3 STEL (total dust) as Particulates not Otherwise Classified

ACGIH TLV: 0.5 mg/m3 TWA (inhalable fraction) sensitizer

Wood Dusts, all other species
CAS No: None
OSHA PEL: 5 mg/m3 TWA (respirable dust) 15 mg/m3 STEL (total dust) as Particulates not Otherwise Classified
ACGIH TLV: 1 mg/m3 TWA (inhalable fraction)

Formaldehyde
CAS No.: 50-00-0
OSHA PEL: 0.75 ppm TWA
SECTION 9: PHYSICAL and CHEMICAL PROPERTIES

- **Physical State/Appearance:** Varies
- **Odor:** Wood species dependent
- **Physical State:** Solid
- **pH:** Not applicable
- **Vapor Pressure:** Not applicable
- **Vapor Density:** Not applicable
- **Boiling Point:** Not applicable
- **Melting Point:** Not applicable
- **Solubility:** (H2O) Insoluble
- **Specific Gravity:** < 1.0

SECTION 10: STABILITY and REACTIVITY

- **Chemical Stability:** This is a stable material.
- **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.
- **Incompatibilities with Other Materials:** Oxidizing agents and drying oils.
- **Hazardous Polymerization:** Will not occur.
- **Hazardous Decomposition Products:** 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.

SECTION 11: TOXICOLOGICAL INFORMATION

**Formaldehyde**

- **Acute Health Effects:** Exposure to gaseous formaldehyde may cause irritation to the nose, throat as well as lead to respiratory disorders. Formaldehyde concentrations as low as 0.1 ppm have been reported to cause some irritation. The level of irritation increases with airborne concentration. Pre-existing respiratory disorders may be aggravated by exposure.

Recent epidemiological studies of workers exposed to formaldehyde have provided sufficient evidence that formaldehyde causes nasopharyngeal cancer in humans but insufficient evidence that formaldehyde causes leukemia or other cancers. In animal studies, rats and mice exposed to high levels of formaldehyde developed nasal cancer while hamsters did not. Formaldehyde is listed by the International Agency for Research on Cancer (IARC) as a known human carcinogen (Group 1). The National Toxicology Program (NTP) included formaldehyde in the Annual Report on Carcinogens as reasonable anticipated to be a carcinogen. OSHA regulates formaldehyde as a potential carcinogen.

**Wood**

- **Acute Health Effects:** 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.

SECTION 12: ECOLOGICAL INFORMATION
Ecological Paragraph:
This product is not expected to have ecological effects on the environment.

Environmental Fate:
Formaldehyde is readily biodegradable.

Effect of Material On Aquatic Life:
Component Analysis – Ecotoxicity - Aquatic Toxicity
Formaldehyde: 96 hr/LC50 fish 10-100 mg/L

SECTION 13 : DISPOSAL CONSIDERATIONS

Waste Disposal:
US EPA Waste Number & Descriptions
General Product Information: If the material is altered by processing, use or contamination, the waste must be tested using methods described in 40 CRF 261 to determine if it meets applicable definitions of hazardous wastes.

Component Waste Numbers:
No EPA Wastes 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 : TRANSPORT INFORMATION

DOT Shipping Information: This material is not a DOT hazardous material.
Canadian TDG: This product is not listed as a hazardous material

SECTION 15 : REGULATORY INFORMATION

Applies to All Ingredients:
This product complies with TSCA inventory requirements.

OSHA 29 CFR 1200:
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 and formaldehyde are hazardous.

State:
California
Proposition 65 provides for labeling and disclosure of the presence of chemical(s) known to the State of California to cause cancer or reproductive toxicity if ordinary use of the product will result in exposures above a no significant risk level.

Canada WHMIS:
CANADA WHMIS:
This product is not a controlled product in the purchased form.

HUD:
The Department of Housing and Urban Development (HUD) Manufactured Home Construction and Safety Standard, regulation 24 CFR 3280 as amended, provides for third-party certification of all plywood, medium density fiberboard (MDF) and particleboard manufactured with urea-formaldehyde resin for formaldehyde emissions. The following formaldehyde emission levels should not be exceeded.

Particleboard:
Applications (Other Than Flooring): 0.3 ppm at a leading rate of 0.13 square feet/cubic foot
Flooring (Decking/Underlayment): 0.2 ppm at a loading rate of 0.13 square feet/cubic foot

Plywood:
0.2 ppm at a loading rate of 0.29 square feet/cubic foot

MDF:
0.3 PPM at a loading rate of 0.08 square feet/cubic foot

ANSI A208.2 2002 MEDIUM DENSITY FIBERBOARD (MDF):
This industry consensus standard limits formaldehyde emissions from MDF to 0.3 ppm at a loading rate of 0.08 square feet/cubic foot.

ANSI A208.1 – 1999 PARTICLEBOARD:
This industry consensus standard limits formaldehyde emissions from
particleboard flooring products (underlayment and manufactured home decking-MHD) to 0.2 ppm at a loading rate of 0.13 square feet/cubic foot.

Particleboard materials used in applications (other than flooring), shall not exceed 0.03 ppm at a loading rate of 0.13 square feet/cubic foot.

MINNESOTA:
Minnesota Statues 2003, Chapters 144.495 and 325F.181 require all UF bonded wood products used or sold in Minnesota meet the HUD Formaldehyde Emission Standard, 24 CFR Sections 3280.308 and 3280.406 for particleboard.

Formaldehyde:
Section 302: Formaldehyde is regulated under SARA Sections 302
Section 304: Formaldehyde is regulated under SARA Sections 304
Section 313 Toxic Release Form: Formaldehyde is regulated under SARA Sections 313.

State:
CALIFORNIA:
The products covered by this MSDS contain formaldehyde and may, depending on conditions, such as temperature and relative humidity, emit formaldehyde gas. Formaldehyde gas is listed under Proposition 65 as a chemical known to the State to cause cancer. Formaldehyde gas emissions have been tested from various vendors and are below the no significant risk level and do not require warnings.

Canada WHMIS:
Wood dust is classified as Class D-2-A.

SECTION 16 : ADDITIONAL INFORMATION

HMIS:
Health Hazard: 1* = Slight * =Chronic Health Hazard
Fire Hazard: 1 = Slight
Reactivity: 0 = Minimal

NFPA:
Health: 1 = Slight
Fire Hazard: 1 = Slight
Reactivity: 0 = Minimal

Label Text: WARNING!
WOOD DUST GENERATED FROM SAWING, SANDING AND MACHINING THIS PRODUCT CAN CAUSE A FLAMMABLE OR EXPLOSION HAZARD. IT MAY ALSO RELEASE SMALL QUANTITIES OF FORMALDEHYDE VAPOR

WOOD DUST MAY CAUSE LUNG, UPPER RESPIRATORY TRACT, EYE AND SKIN IRRITATION. THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) AND THE NATIONAL TOXICOLOGY PROGRAM (NTP) LIST WOOD DUST AS A (GROUP 1) CARCINOGEN.

FORMALDEHYDE GAS MAY CAUSE IRRITATION TO THE NOSE, THROAT AS WELL AS LEAD TO RESPIRATORY DISORDERS. THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) LISTS FORMALDEHYDE AS A (GROUP 1) CARCINOGEN AND IS INCLUDED IN THE NATIONAL TOXICOLOGY PROGRAM (NTP) ANNUAL REPORT ON CARCINOGENS.

Label Precautions: Avoid dust contact with ignition source.
Wood dust clean up and disposal activities should be accomplished in a manner to minimize creation of airborne dust.
Avoid breathing dust.
Avoid dust contact with eyes and skin.
Store in cool, dry, well ventilated area to reduce the buildup of formaldehyde gas.

HANDLING AND STORAGE
Avoid frequently or prolonged inhalation of wood dust. Protect eyes from flying particles. Avoid contact with skin and wash exposed areas thoroughly. Change protective clothing and gloves when sign of contamination appear.

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 likelihood of ignition or dispersion of dust into the air.

Label First Aid: If inhaled, remove to fresh air. In case of contact, flush eyes and skin with water. If irritation persists, seek medial attention.

MSDS Revision Date: 9/6/2006
Supersedes: 5/10/2004

MSDS Author: For additional information, see Material Safety Data Sheets available at: BlueLinx Corporation
Product Services
Disclaimer:

IMPORTANT: The information and data herein are believed to be accurate and have been compiled from sources believed to be reliable. It is offered for your consideration, investigation and verification. Buyer assumes all risk of use, storage and handling of the product in compliance with applicable federal, state and local laws and regulations. BLUELINX CORPORATION MAKES NO WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, CONCERNING THE ACCURACY OR COMPLETENESS OF THE INFORMATION AND DATA HEREFIN. THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE SPECIFICALLY EXCLUDED. BlueLinx Corporation will not be liable for claims relating to any party’s use of or reliance on information and data contained herein regardless of whether it is claimed that the information and data are inaccurate, incomplete or otherwise misleading.

This Material Safety Data Sheet is being furnished for similar wood products produced by different manufacturers. Consult labels, stamps and markings on the product or packaging for the exact identity of the manufacturer.

Key/Legend:
- ACGIH American Conference of Governmental Industrial Hygienists
- C Ceiling Limit
- CAS Chemical Abstract Services Number
- CFR Code of Federal Regulations
- DOT Department of Transportation
- DSL Domestic Substance List
- EPA Environmental Protection Agency
- HEPA High Efficiency Particulate Air
- HMIS Hazardous Material Identification System
- IARC International Agency for Research on Cancer
- NA Not Available or Not Applicable
- NFPA National Fire Protection Association
- NIOSH National Institute for Occupational Safety and Health
- NJTSR New Jersey Trade Secret Registry
- NSL Non-Domestic Substance List
- NTP National Toxicology Program
- OSHA Occupational Safety and Health Administration
- PPE Personal Protective Equipment
- STEL Short Term Exposure Limit
- TLV Threshold Limit Value
- TSCA Toxic Substance Control Act
- TWA Time Weighted Average
- WHIMS Workplace Hazardous Materials Information System

NFPA Ratings:
Hazard Scale: 0 = Minimal, 1 = Slight, 2 = Moderate, 3 = Serious, 4 = Severe

HMIS Ratings:
Hazard Scale: 0 = Minimal, 1 = Slight, 2 = Moderate, 3 = Serious, 4 = Severe, * =Chronic Health Hazard

UF Bonded Wood Products #3