

MATERIAL SAFETY DATA SHEET

Uniboard USA LLC

Product Name: Particleboard

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SECTION 1: Composite Panel Product and Company Identification

Product Identifier: Unfinished Particleboard

General use: Re-manufacturing construction and furniture processes.

Product Description: A panel product manufactured from cellulosic materials bonded together with a synthetic resin or other suitable binder, and which may contain additives.

MANUFACTURER:

Uniboard USA LLC

985 Corinth Road.

Moncure, North Carolina 27559

EMERGENCY TELEPHONE NUMBER:

919-542-2128

SECTION 2: Composition/Information on Ingredients

	Wt %	CAS Registry #
Ligno-cellulosic Materials	90 - 93	N/A
Polymerized Urea Formaldehyde Resin	7 - 10	9011-05-6

OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200):

	<u>EXPOSURE LIMITS</u>
Formaldehyde CAS Registry # 50-00-0	OSHA PEL – TWA: 0.75 PPM OSHA PEL – STEL: 2 PPM ACGIH TLV – Ceiling: 0.30 PPM
Wood Dust/Ligno-cellulosic fiber ^{1,2}	OSHA PEL – TWA 15.0 mg/m ³ (total dust) 5.0 mg/m ³ (respirable fraction)
Wood Dust/Ligno-cellulosic fiber ^{1,2} (Softwood)	ACGIH TLV – TWA: 1.0 mg/m ³ (inhalable dust) ACGIH – STEL (15 min): 10.0 mg/m ³
Wood Dust/Ligno-cellulosic fiber ^{1,2} (Certain hardwoods such as beech and oak)	ACGIH TLV – TWA: 1.0 mg/m ³

1. In AFL-CIO v. OSHA 965 F. 2d 962 (11th Cir. 1992), the court overturned OSHA's 1989 Air Contaminants Rule, including the specific PELs for wood dust that OSHA had established at that time. The 1989 PELs were: TWA – 5.0 mg/m³ ; STEL (15 min.) – 10.0 mg/m³ (all soft and hard woods, except Western red cedar) Western red cedar: TWA – 2.5 mg/m³.

2. Wood dust is now officially regulated as an organic dust under the Particulates Not Otherwise Regulated (PNOR) or Inert or Nuisance Dust categories at PELs noted in the Composition/Information on Ingredients section of this MSDS. However, a number of states have incorporated provisions of the 1989 standard in their state plans. Additionally, OSHA has announced that it may cite companies under the OSHA General Duty Clause under appropriate circumstances for non-compliance with the 1989 PELs.

SECTION 3: Hazards Identification

EMERGENCY OVERVIEW:

The product may release small quantities of formaldehyde in gaseous form. Emissions decrease through time as the panels age. Manual or mechanical cutting or abrasion processes performed on the product can result in generation of wood dust.

POTENTIAL HEALTH EFFECTS:

ACUTE

INHALATION:

Gaseous formaldehyde may cause temporary irritation to nose and throat. Some reports suggest that formaldehyde may cause respiratory sensitization, such as asthma, and that pre-existing respiratory disorders may be aggravated by exposure.

Wood dust may cause nasal dryness, irritation and obstruction. Coughing, wheezing, sneezing, sinusitis and prolonged colds have also been reported.

EYE CONTACT:

Gaseous formaldehyde may cause temporary irritation or a burning sensation. Wood dust can cause mechanical irritation.

SKIN CONTACT:

Both formaldehyde and various species of wood dust may evoke allergic contact dermatitis in sensitized individuals.

INGESTION:

Not likely to occur.

CHRONIC

International Agency for Research on Cancer (IARC) has listed formaldehyde as a probable human carcinogen. The National Toxicology Program (NTP) includes formaldehyde in its Annual Report on carcinogens. OSHA regulates formaldehyde as a potential cancer agent.

In studies involving rats, formaldehyde has been shown to cause nasal cancer after long-term exposure to very high concentrations (14+ PPM), far above those normally found in the workplace.

The National Cancer Institute (NCI) conducted an epidemiological study of industrial workers exposed to formaldehyde (published June 1986). The NCI concluded that the data provides little evidence that mortality from cancer is associated with formaldehyde exposure at the levels experienced by workers in the study.

Wood dust, depending on species, may cause respiratory sensitization and/or irritation. IARC classifies wood dust as a carcinogen to humans (Group 1). This 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 exposure to wood dust. IARC 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. The NTP includes wood dust as a known human carcinogen in its Tenth Report on Carcinogens dated November, 2002.

SECTION 4: First Aid Measures

INHALATION:

Remove to fresh air. Get medical attention if irritation persists, severe coughing or breathing difficulty occurs.

EYE CONTACT:

Flush eyes with large amounts of water. Remove to fresh air. If irritation persists, get medical attention.

SKIN CONTACT:

Wash affected areas with soap and water. Get medical attention if rash or irritation persists or dermatitis occurs.

INGESTION:

Not Applicable.

SECTION 5: Fire Fighting Measures

FIRE FIGHTING HAZARD:

Wood is classified as a Class A combustible material.

FLASHPOINT AND METHOD:

Not Applicable.

FLAMMABLE LIMITS:

Not Applicable.

AUTOIGNITION TEMPERATURE:

204 – 260 °C (400 – 500 °F)

Ignition of wood takes place when wood is subject to sufficient heat and in atmospheres that have sufficient oxygen. Ignition can be of two types: piloted or unpiloted. Piloted ignition occurs in the presence of an ignition source (such as a spark or flame). Unpiloted ignition is ignition that occurs where no pilot source is available. The surface temperature of wood materials has been measured somewhere between 300 °C and 400 °C (572 °F to 752 °F) prior to piloted ignition. Unpiloted ignition depends on special circumstances that result in different ranges of ignition temperatures. At this time, it is not possible to give specific ignition data that apply to a broad range of cases. With convection heating of wood, unpiloted ignition has been reported as low as 270 °C (518 °F) and as high as 470 °C (878 °F).

FIRE FIGHTING INSTRUCTIONS:

Fire fighting procedures for extinguishing a Class A fire should be followed.

When extinguishing a fire in a wood dust or fiber pile care needs to be taken. A direct stream of water, into the pile from a hose, could cause the burning material to become airborne creating a risk in spreading the fire to other areas.

Water is used to quench the burning material below its ignition temperature. The addition of Class A foams (sometimes referred to as wet water) may enhance water's ability to extinguish Class A fires, particularly those that are deep seated in bulk materials (such as piles of hay bales, sawdust piles, etc.). This is because the Class A foam agent reduces the water's surface tension, allowing it to penetrate more easily into piles of material. Class A fires are difficult to extinguish using oxygen-exclusion methods like CO₂ flooding or coating with foam because these methods do not provide the cooling effect needed for total extinguishment.

FIRE FIGHTING EQUIPMENT:

Use recommended Class A fire fighting equipment when fighting an incipient fire.

HAZARDOUS COMBUSTION PRODUCTS:

Sawing, sanding or machining can produce wood dust as a by-product that may present an explosion hazard.

SECTION 6: Accidental Release Measures

LAND SPILL:

Generally not applicable to panel products, however if a spill occurs the applicable Federal, Provincial, state, and local regulations must be followed.

WATER SPILL:

Generally not applicable to panel products, however if a spill occurs the applicable Federal, Provincial, state and local regulations must be followed.

SECTION 7: Handling and Storage

STORAGE:

This product should not be stored where exposure to water could occur or near a source of ignition. Avoid storing in areas of high relative humidity and temperature. High temperature and inadequate ventilation could allow concentrations of formaldehyde vapors in the storage area. Adequate ventilation of the storage area will help reduce the build-up of the formaldehyde vapors. It is recommended to store product in an area of relative humidity and temperature that approximates end use.

SECTION 8: Exposure Controls/ Personal Protection

ENGINEERING CONTROLS:

Certain activities of the re-manufacturing process of this product could possibly produce wood dust or formaldehyde vapors. Provide adequate general and local exhaust ventilation to keep airborne contaminant concentration levels below the OSHA PELs.

PERSONAL PROTECTION

RESPIRATOR:

Wear NIOSH/MSHA approved respirator when the allowable exposure limits may be exceeded.

PROTECTIVE CLOTHING:

Wear side shield safety glasses during the re-manufacturing of this product. Other protective equipment such as gloves and outer garments may be needed depending on dust conditions.

GENERAL HYGIENE:

Practice proper personal hygiene.

SECTION 9: Physical and Chemical Properties

Vapor Pressure: not applicable	Vapor Density: not applicable
Specific Gravity: generally < 1	Evaporation Rate: not applicable
Solubility in Water: Insoluble	Freezing Point: not applicable
pH: not applicable	Odor: Material Dependent
Boiling Point: not applicable	Appearance: Material Dependent
Viscosity: not applicable	Physical State: Solid

SECTION 10: Stability and Reactivity

STABILITY:

Stable under normal conditions.

REACTIVITY:

Avoid product contact with any temperature sources that could induce thermal decomposition. Avoid product contact with oxidizing agents and strong acids.

HAZARDOUS DECOMPOSITION:

Thermal and/or thermal-oxidative decomposition can produce irritating and toxic fumes and gases, including carbon monoxide, hydrogen cyanide, polynuclear aromatic hydrocarbons, aldehydes and organic acids.

SECTION 11. Toxicological Information

See page 2.

SECTION 12: Ecological Information

No applicable information found.

SECTION 13: Disposal Considerations

This panel product is recyclable. It is, however, the user's responsibility to determine at the time of disposal whether your product meets any applicable criteria for hazardous waste disposal. Disposal must follow applicable Federal, Provincial, state and local regulations.

SECTION 14: Transport Information

Department of Transportation (DOT): This product is not a DOT hazardous material.

It is the purchaser's responsibility to see if this product meets any regulations depending on their location.

SECTION 15: Regulatory Information

OSHA: Wood products are not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200; however, formaldehyde emissions from this product and wood dust generated by sawing, sanding or machining this product may be hazardous.

DOT: This product is not a DOT hazardous material.

TSCA: This product complies with TSCA inventory requirements.

SARA 313: None.

HUD: The Department of Housing and Urban Development (HUD) regulation of 24 CFR 3280 provides for third-party certification of particleboard and interior plywood manufactured with urea-formaldehyde resin for formaldehyde emissions. The maximum allowable level for particleboard is 0.3 ppm at a loading ratio of 0.13 ft²/ft³. Certification is made in accordance with FTM-2-1985 (ASTM E1333-90), Large Scale Test Method for Determining Formaldehyde Emissions for Wood Products. Moncure particleboard is certified to meet this HUD standard.

California Proposition 65: Warning Statement – This product contains formaldehyde (CAS 50-00-0), a chemical known by the State of California to cause cancer.

CARB : The California Code of Regulations requires this product to meet regulation 93120 including a maximum formaldehyde emission level of 0.18 ppm. This product meets this standard.

Minnesota: Minnesota Statute 1984 sections 144.495 and 325F.18 require all particleboard and plywood sold or used in Minnesota meet the HUD Formaldehyde Emission Standard, 24 CFR Sections 3280.308 and 3280.406. This product meets this standard.

ANSI A208.1-1999 PARTICLEBOARD: This industry consensus standard limits formaldehyde emissions from particleboard flooring products (underlayment and mobile home decking) to 0.2 ppm at a loading ratio of 0.13 ft²/ft³. This product is voluntarily manufactured to this standard of formaldehyde emissions.

Canadian WHMIS: This product is not considered a controlled product.

SECTION 16: Other Information

DEFINITIONS OF ACRONYMS:

ANSI:	American National Standards Institute
ACGIH:	American Conference of Governmental Industrial Hygienists
ASTM:	American Society for Testing and Materials
CAS:	Chemical Abstracts Services Registry Number
CARB:	California Air Resources Board
DOT:	Department of Transportation
FTM:	Formaldehyde Test Methods
HUD:	Department of Housing and Urban Development
IARC:	International Agency for Research on Cancer
MSHA:	Mining Safety and Health Administration
NIOSH:	National Institute for Occupational Safety and Health, U.S. Public Health Service, U.S. Department of Health and Human Services
NCI:	National Cancer Institute
NTP:	National Toxicology Program
OSHA:	Occupational Safety and Health Administration, U.S. Department of Labor
PEL:	Permissible Exposure Limit
SARA:	Superfund Ammendments and Reauthorization Act
STEL:	Short Term Exposure Limit
TSCA:	Toxic Substances Control Act
TLV:	Threshold Limit Value
TWA:	Time-weighted Average
WHMIS:	Workplace Hazardous Materials Information System

DISCLAIMER

This information was believed to be accurate at the time of preparation, and compiled from sources believed to be reliable. Products and/or articles manufactured from this product may have characteristics which are significantly different; therefore, it is the user's responsibility to investigate and understand other pertinent information and to comply with all applicable laws and regulations. There is no warranty of any kind, express or implied, concerning product or merchantability or fitness thereof for any purpose. Buyer assumes all risk of use, storage and handling of the product in compliance with applicable Federal, State and local laws and regulations. Uniboard USA LLC 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 the information and data are inaccurate, incomplete or otherwise misleading.