

**MATERIAL SAFETY DATA SHEET****SECTION I - PRODUCT IDENTIFICATION**

**PRODUCT NAME:** Particleboard  
**TRADE NAME:** TemStock, Underlayment, Shelving  
**SYNONYMS:** N/A  
**CHEMICAL FAMILY:** N/A  
**CHEMICAL FORMULA:** N/A  
**CAS NUMBER:** None  
**MANUFACTURER'S NAME AND ADDRESS:**  
Temple-Inland Forest Products Corporation  
P.O. Drawer N  
Diboll, Texas 75941  
Contact: Don Cox, Manager Chemical Control & Health Programs  
**EMERGENCY TELEPHONE NUMBER:** 936-829-5511  
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**SECTION II - HAZARDOUS INGREDIENTS**

COMPONENT	CAS #	EXPOSURE LIMIT (OSHA)*	EXPOSURE LIMIT (ACGIH)*
Formaldehyde	50-00-0	0.75 ppm 8-hr TWA 2 ppm 15-min STEL	0.3 ppm Ceiling
Wood Dust	None	5 mg/m <sup>3</sup> 8-hr TWA 10 mg/m <sup>3</sup> 15-min STEL	5 mg/m <sup>3</sup> 8-hr TWA 10 mg/m <sup>3</sup> 15-min STEL

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/m<sup>3</sup>; STEL (15 min.) - 10.0 mg/m<sup>3</sup> (all soft and hard woods, except Western red cedar); Western red cedar: TWA - 2.5 mg/m<sup>3</sup>.

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 under Section II 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 OSH Act General Duty Clause under appropriate circumstances for non-compliance with the 1989 PELs.

\*NOTE: Although Agency and Court decision(s) could affect these values, the Company will continue to utilize these values as the PEL.

**SECTION III - PHYSICAL PROPERTIES****DESCRIPTION**

Composite panel product composed of resin and wood particles of varying percents (dependent on properties and thickness) pressed into panels of various sizes (normally 4 ft. X 8 ft.). May be colored due to the addition of wood coloring dye during manufacture.

**PHYSICAL DATA**

**BOILING POINT** - Not Applicable  
**SPECIFIC GRAVITY** - Variable (Dependent on wood species and moisture content)  
**VAPOR DENSITY** - Not Applicable  
**% VOLATILES BY VOLUME** - Not Applicable  
**MELTING POINT** - Not Applicable  
**VAPOR PRESSURE** - Not Applicable  
**SOLUBILITY IN H<sub>2</sub>O (% BY WT.)** - Insoluble  
**EVAPORATION RATE (Butyl Acetate = 1)** - Not Applicable  
**pH** - Not Applicable  
**APPEARANCE AND ODOR** - Light to dark colored granular solid. Color and odor are dependent on the wood species and time since board was manufactured and if any dye is present.

**SECTION IV - FIRE AND EXPLOSION DATA**

**FLASH POINT** - Not Applicable

**AUTO IGNITION TEMPERATURE** - 425 - 475 deg F

**FLAMMABLE LIMITS** - Formaldehyde LEL 7%, UEL 73%

**FIRE EXTINGUISHING MEDIA** - Water Spray, Carbon Dioxide

**SPECIAL FIRE FIGHTING PROCEDURES** - Fire fighting procedures for wood products are well known.

**UNUSUAL FIRE AND EXPLOSION HAZARDS** - Particleboard does not present a fire or explosion hazard. Sawing, sanding, or machining particleboard could result in the creation of wood dust. Wood dust may present a strong to severe explosion hazard if a dust cloud contacts an ignition source. According to data contained in NFPA Standards, .04 ounce per cubic foot is the minimum explosive concentration for wood flour.

**SECTION V - HEALTH HAZARD DATA**

**Wood Dust/Fiber:** May cause nasal dryness, irritation and mucostasis. Coughing, wheezing, sneezing sinusitis and prolonged colds have also been reported. 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.

**Signs and Symptoms of Exposure:** Acute - may cause temporary irritation of skin, eyes, or respiratory system. If irritation persists consult a physician. Chronic - rats exposed to 14 ppm formaldehyde developed nasal cancer. The NCI epidemiology study of 26,000 workers found little, if any, evidence linking formaldehyde exposure to cancer. The EPA has classified formaldehyde a B-1 Probable Human Carcinogen. Formaldehyde is listed by the IARC and the NTP as an animal carcinogen.

**EMERGENCY FIRST AID PROCEDURES**

**Inhalation, Eyes, Skin** - Remove to fresh air

**Ingestion** - N/A

**SECTION VI - REACTIVITY DATA**

**STABILITY** - Stable

**CONDITIONS TO AVOID** - High relative humidity and high temperature increases the rate of formaldehyde emissions in particleboard.

**INCOMPATIBILITY (materials to avoid)** - Strong oxidizing agents, strong acids

**HAZARDOUS DECOMPOSITION PRODUCTS** - Thermal and/or thermal-oxidative decomposition can produce irritating and potentially toxic fumes and gases, including CO, aldehydes and organic acids.

**HAZARDOUS POLYMERIZATION** - Will not occur

**SECTION VII - SPECIAL PRECAUTION PROCEDURES**

**PRECAUTIONS AND SAFE HANDLING:** Provide adequate ventilation to reduce the possible build-up of formaldehyde vapors.

**STEPS TO BE TAKEN IF SPILLED OR RELEASED:** See above.

**WASTE DISPOSAL METHOD:** Incinerate or landfill in accordance with local, state, and federal regulations.



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**SECTION VIII - SPECIAL PROTECTION INFORMATION**

**RESPIRATORY PROTECTION**

Not required. However, the wearing of NIOSH approved breathing protection for exposure to wood dust may be necessary. Respirators are required if air contaminants exceed OSHA PEL.

**VENTILATION**

**Local Exhaust:** Necessary to remove dust in sanding, sawing and machine processes.

**Mechanical:** Ventilate to assure formaldehyde concentration is less than the OSHA PEL.

**EYE PROTECTION**

Wear appropriate eye protection or safety goggles if wood dust exposure is likely.

**SECTION IX - REGULATORY INFORMATION**

**H.U.D.:** The HUD regulation of 24 CFR Part 3280 provides for third party certification of particleboard manufactured with urea-formaldehyde resin for formaldehyde emissions. Maximum level is 0.3 ppm (large chamber test method).

**CALIFORNIA PROPOSITION 65 - Safe Drinking Water and Toxic Enforcement Act:** Title 22 California Code of Regulations California Proposition 65 provides for labeling and disclosure of the presence of a chemical(s) known to the State of California to cause cancer or reproductive toxicity. This product contains Formaldehyde in extremely low levels and may, depending on conditions, emit Formaldehyde. Based on a preponderance of data and the recognition by OSHA that 0.75 ppm TWA is a safe employee exposure level, we do not feel that exposure to this product presents significant risk to users.

**SARA 313 -** This product does not contain chemical(s) in concentrations which should require reporting under SARA 313.

**ODS:** During the manufacture of this product there is no intended use of listed ozone depleting chemicals as defined in applicable EPA regulations.

**IMPORTANT:** Temple-Inland Forest Products Corporation believe the information contained in this MSDS to be accurate at the time of preparation and has been compiled using sources believed to be reliable. However, Temple-Inland Forest Products Corporation makes no warrant, either expressed or implied concerning the accuracy or completeness of the information presented. It is the responsibility of the user to comply with local, state, or federal regulations concerning use of this product. It is the further responsibility of the buyer to research and understand safe methods of use, storage, handling and disposal of this product.

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