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# MATERIAL SAFETY DATA SHEET

## UREA-FORMALDEHYDE BONDED WOOD PRODUCT

### PRODUCT IDENTIFICATION:

Hardwood Plywood (Veneer Core, Lumber Core, Particleboard, Medium Density Fiberboard, or Mende Board).

### TRADE NAME:

None

### DESCRIPTION:

This panel contains a hardwood veneer face (occasionally a decorative softwood face) bonded to wood components such as other wood veneer, lumber core, particleboard, medium density fiberboard or mende board using urea-formaldehyde resin.

### POTENTIAL AIRBORNE RELEASES:

The product may release small quantities of formaldehyde (CAS No. 50-00-0) in gaseous form. Emissions decreased through time as the panel ages. Manual or mechanical cutting or abrasion processes performed on these products can result in generation of wood dust.

### PHYSICAL DATA:

Boiling Point.....	Not Applicable
Specific Gravity.....	Variable, depends on species and moisture content
Vapor Density.....	Not Applicable
Percent Volatiles.....	0
Melting point.....	Not Applicable
Vapor Pressure.....	Not Applicable
Solubility in water (% by wt.).....	<0.1%
Evaporation Rate.....	Not Applicable
PH.....	Not Applicable
Appearance and color.....	Light to dark color. Color and order depends on wood species.

### FIRE AND EXPLOSION DATA:

Flash Point.....	Not Applicable
Auto ignition Temperature.....	Typically 400-500 degrees
Explosive limits in air.....	See below "Unusual Fire and Explosion Hazards."
Extinguishing media.....	Water, carbon dioxide, sand
Special fire fighting procedures.....	None
Unusual fire and explosion hazard.....	Sawing, sanding or machining can produce wood dust as a by-product which may present an explosion if a dust cloud contacts an ignition source. An airborne concentration of 40 gram of dust per Cubic meter of air is often used as the LEL of wood

### REACTIVITY DATA:

Conditions contributing to instability.....	Stable under normal conditions
Incompatibility.....	Avoid contact with oxidizing agents. Avoid open flame. Product may ignite in excess of 400 degrees F.
Hazardous decomposition products.....	Thermal and/or thermal oxidative decomposition can produce irritating and toxic fumes and gases including carbon monoxide, Hydrogen Cyanide, aldehydes, organic acids and polynuclear Aromatic compounds.
Hazardous polymerization.....	Not Applicable

**HEALTH EFFECTS INFORMATION:**

**Exposure limits:**

- Formaldehyde.....
- Wood dust (hard and soft woods).....
- Wood dust (western red cedar).....
- Wood dust (certain hardwood such as beech and oak).....
- Eye contact.....
- Skin Contact.....
- Ingestion.....
- Inhalation: gaseous formaldehyde.....

OSHA PEL-TWA	0.20ppm
OSHA PEL-STEL	2 ppm
ACGIH TLV-CEILING	0.3 ppm
OSHA PEL-TWA	5 mg/m <sup>3</sup>
OSHA PEL-TWA	2.5 mg/m <sup>3</sup>
ACGIH TLV-TWA	1 mg/m <sup>3</sup>

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

Both formaldehyde and various species of wood dust may evoke allergic contact dermatitis in sensitized individuals. Not likely to occur.

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

Formaldehyde is listed by the International Agency for Research on Cancer (IARC) as a probable human carcinogen. The National Toxicology Program (NTP) includes formaldehyde in the Annual Report on Carcinogens. Formaldehyde is regulated by OSHA 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 work place using this product.

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.....

May cause nasal dryness, irritation, and obstruction. Coughing, wheezing, and sneezing; sinusitis and prolonged colds have also been reported.

**PRECAUTIONS, SAFE HANDLING:**

Formaldehyde: Provide adequate ventilation to reduce possible build-up of formaldehyde gas, particularly when high temperature occurs  
 Wood dust: Avoid dusty conditions and provide good ventilations

**GENERALLY APPLICABLE CONTROL MEASURES:**

Ventilation: Provide adequate general and local exhaust ventilation to keep airborne contaminant concentration levels below OSHA PELs  
 Personal Protective Equipment: Wear goggles or safety glasses when manufacturing or machining the product. Wear NIOSH/MSHA approved respirator when the allowable exposure limits may be exceeded. Other protected equipment such as gloves and outer garments may be needed depending on dust conditions.

**EMERGENCY AND FIRST AID PROCEDURES:**

- Eyes..... Flush with large amounts of water. Remove to fresh air. If irritation persists get medical attention
- Skin..... Wash affected area with soap and water. Get medical advise if rash or persistent irritation or dermatitis occurs
- Inhalation..... Remove to fresh air. Get medical advice if persistent irritation, severe coughing or breathing difficulty occurs
- Ingestion..... Not applicable