

MATERIAL SAFETY DATA SHEET

SECTION 1: IDENTIFICATION

Trade Name: Medium-Density Fiberboard

Synonyms: MDF, Fiberboard

Description: A panel product manufactured from ligno-cellulosic fibers combined with a synthetic resin or other suitable binder.

Product Name:

Malvern: Willamette MDF, Malvern MDF, Molding Embossing Grade

Eugene: Eugene MDF

Bennettsville: Premier, Premier Plus, Premier Lite

Custom Products: Drawer Sides, Flat Panel, WillTrim, Shelving

Manufacturer's Name: WILLAMETTE INDUSTRIES, INC.

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SECTION 2: HAZARDOUS INGREDIENTS

Formaldehyde

Under some conditions the following hazardous chemical may be released from medium-density fiberboard:

Chemical	CAS #	OSHA Exposure Limit	ACGIH Exposure Limit
Formaldehyde	50-00-0	0.75 ppm 8-hr TWA PEL 2 ppm STEL	0.3 ppm Ceiling*

**Based on sensory exposure*

SECTION 3: PHYSICAL CHARACTERISTICS

Boiling Point:	N/A
Specific Gravity (H₂O = 1):	<1
Vapor Pressure:	N/A
Appearance and Odor:	Straw yellow (light brown). No distinctive odor.
Melting Point:	N/A
Vapor Density:	N/A
Reactivity in Water:	N/A
Evaporation Rate:	N/A

SECTION 4: FIRE & EXPLOSION DATA

Flash Point:	N/A
Auto Ignition Temperature:	425° - 475°F
Explosive Limits in Air:	Medium-Density Fiberboard is not an explosion hazard. Sawing, sanding or machining MDF could result in the by-product wood dust. Wood dust may present a strong to severe explosion hazard if a dust cloud contacts an ignition source.
Fire Extinguisher Media:	Water spray; carbon dioxide
Special Fire Fighting Procedures:	Fire fighting procedures for wood products are well known.

SECTION 5: HEALTH HAZARD DATA

Formaldehyde Vapor

Signs and Symptoms of Exposure:

Acute - May cause temporary irritation of skin, eyes, or respiratory system. May cause sensitization in susceptible individuals.

Chronic - Numerous epidemiological studies have failed to demonstrate a relationship between formaldehyde exposure and nasal cancer or pulmonary diseases such as emphysema or lung cancer. UAREP concluded that there was no "convincing evidence" that formaldehyde exposure causes cancer in humans. Rats exposed to 14ppm of formaldehyde for 24 months in the laboratory developed nasal cancer. Exposure of 6 ppm did not result in statistically significant levels. The NCI epidemiology study of 26,000 workers found little evidence linking formaldehyde exposure to cancer. Formaldehyde is classified by OSHA, NTP and IARC as a probable or potential carcinogen.

Medical Conditions Aggravated by Exposure:

Respiratory conditions or allergies.

Emergency First Aid Procedures:

Inhalation: Remove to fresh air
Eyes: Remove to fresh air
Skin: Remove to fresh air
Ingestion: N/A

If irritation or other symptoms persist, consult a physician.

SECTION 6: REACTIVITY DATA

Stability: Stable

Conditions to Avoid: High relative humidity and high temperature increase the rate of emission of formaldehyde from MDF.

Incompatibility:

Materials to Avoid: Strong oxidizing agents, strong acids.

Hazardous Decomposition Products:

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

Hazardous Polymerization: None will occur.

Conditions to avoid: None

SECTION 7: PRECAUTIONS

Precautions to be Taken in Handling and Storage:

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.

SECTION 8: SPECIAL PROTECTION INFORMATION

Respiratory Protection:

Wear OSHA approved respirators where the formaldehyde level exceeds the OSHA PEL or STEL.

Ventilation:

Ventilate to assure formaldehyde concentration is less than OSHA PEL and STEL.

SECTION 9: REGULATORY INFORMATION

Minnesota:

Minnesota Statutes, 1984, Section 144.495 and 325F.18 require that all particleboard and medium-density fiberboard sold or used in Minnesota meet the HUD Formaldehyde Emission Standard, 24 CFR Sections 3280.308 and 3280.406.

California's Safe Drinking Water and Toxic Enforcement Act of 1986 (Initiative Measure, Proposition 65):

Title 22 California Code of Regulations requires that a clear and reasonable warning be given before exposure to chemicals listed by the State as causing cancer or reproductive toxicity. Formaldehyde is on California's list of chemicals known to the State to cause cancer.

New York State Uniform Fire Prevention and Building Code Combustion Toxicity Testing:

New York State statutes require that wood products be tested for smoke toxicity and that a report be filed with the Department of State.

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