

RADIATA PINE

WAUWATOSA / IDC / NASHOTAH
WOOD / BONDED / TREATED - WEYERHAEUSER
WOOD DUST

10/03

**Material Safety Data Sheet
Phenol Formaldehyde (PF) Or Phenol-Resorcinol Formaldehyde
(PRF) Bonded Products**

Weyerhaeuser Company
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Emergency Phone: (253) 924-5000
Additional Information: (253) 924-3865

1. Product Identification

Product	Manufacturing Location
Microllam® Laminated Veneer Lumber (LVL)	Castleberry, AL. Eugene, OR., Junction City, OR., Nachitoches, LA., Stayton, OR., Valdosta, GA.
Parallam® Parallel Strand Lumber (PSL)	Buckhannon, WV., Colbert, GA., Vancouver, BC.
Open-Web Trusses	Chino, CA., Claresholm, Alberta, Delaware, OH., Hillsboro, OR.

Synonyms: Phenol Formaldehyde/Resorcinol Formaldehyde Bonded Product , Header.

2. Hazardous Ingredients/Identity Information

Name	CAS#	Percent	Agency	Exposure Limits	Comments
Wood	None	90-99	OSHA OSHA ACGIH ACGIH ACGIH Recommended Recommended Recommended	PEL-TWA 15 mg/m ³ PEL-TWA 5 mg/m ³ TLV-TWA 5 mg/m ³ TLV-STEL 10 mg/m ³ TLV-TWA 1 mg/m ³ PEL-TWA 5 mg/m ³ PEL-STEL 10 mg/m ³ PEL-TWA 2.5 mg/m ³	Total dust Respirable dust fraction Softwood total dust Softwood total dust Selected hardwood total dust (beech, oak, others) Softwood or hardwood total dust Softwood or hardwood total dust Western red cedar total dust
⁴ Phenol formaldehyde or Phenol-resorcinol formaldehyde resin solids	None	1-9	OSHA OSHA ACGIH	PEL-TWA 0.75 ppm PEL-STEL 2 ppm TLV-Ceiling 0.3 ppm	Free gaseous formaldehyde Free gaseous formaldehyde Free gaseous formaldehyde
Paraffin wax	8002-74-2	0-2	OSHA ACGIH	PEL-TWA 2 mg/m ³ TLV-TWA 2 mg/m ³	Paraffin wax fume Paraffin wax fume

¹ Weyerhaeuser recommended exposure limits based on 1989 OSHA PELs. In 1992, the U.S. Court of Appeals for the Eleventh Circuit Court overturned OSHA's 1989 Air Contaminants Rule, which included specific PELs for wood dust established by OSHA at that time. Wood dust is now officially regulated as an organic dust in a category known as "Particulates Not Otherwise Regulated" (PNOR), or Nuisance Dust. However, a number of states have incorporated the OSHA PELs from 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 noncompliance with the 1989 PELs.

² These products contain less than 0.05% free formaldehyde. Phenol formaldehyde resin is used in face/surface material and or center/core material.

3. Hazard Identification

Appearance and Odor: Laminated product with a slightly aromatic resinous odor and natural wood color. The wood component of these products may consist of aspen, douglas fir, western hemlock, southern yellow pine or yellow poplar.

Primary Health Hazards: The primary health hazard posed by this product is thought to be due to exposure to wood dust.

Primary Route(s) of Exposure:

- Ingestion:
- Skin: Dust
- Inhalation: Dust

Medical Conditions Generally Aggravated by Exposure: Wood dust may aggravate preexisting respiratory conditions or allergies.

Chronic Health Hazards: Wood dust, depending on the species, may cause allergic contact dermatitis and respiratory sensitization with prolonged, repetitive contact or exposure to elevated dust levels. Prolonged exposure to wood dust has been reported by some observers to be associated with nasal cancer.

Carcinogenicity Listing:

- NTP: Not listed
- IARC Monographs: Wood dust, Group 1
- OSHA Regulated: Formaldehyde Gas

IARC - Group 1: Carcinogenic to humans; sufficient evidence of carcinogenicity. This classification is primarily based on studies showing an association between occupational exposure to wood dust and adenocarcinoma of the nasal cavities and paranasal sinuses. IARC did not find sufficient evidence of an association between occupational exposure to wood dust and cancers of the oropharynx, hypopharynx, lung, lymphatic and hematopoietic systems, stomach, colon or rectum.

4. Emergency and First-Aid Procedures

Ingestion: Not applicable under normal use.

Eye Contact: Wood dust may cause mechanical irritation. Treat dust in eye as foreign object. Flush with water to remove dust particles. Get medical help if irritation persists.

Skin Contact: Wood dust of certain species can elicit allergic contact dermatitis in sensitized individuals, as well as mechanical irritation resulting in erythema and hives. Get medical help if rash, irritation or dermatitis persists.

Skin Absorption: Not known to occur under normal use.

Inhalation: Wood dust may cause obstruction in the nasal passages, resulting in dryness of nose, dry cough, sneezing and headaches. Remove to fresh air. Get medical help if persistent irritation, severe coughing or breathing difficulty occurs.

5. Fire and Explosion Data

Flash Point (Method Used): NAP

Flammable Limits:

LEL: See below under "Unusual Fire and Explosion Hazards"

UEL: NAP

Extinguishing Media: Water, carbon dioxide, sand.

Autoignition Temperature: Variable [typically 400-500°F (204-260°C)]

Special Firefighting Procedures: None.

Unusual Fire and Explosion Hazards: Depending on moisture content and more importantly, particle diameter, wood dust may explode in the presence of an ignition source.

A concentration of 40 grams (40,000 mg) of dust per cubic meter of air is often used as the LEL for wood dusts.

6. Accidental Release Measures

Steps to be Taken In Case Material Is Released or Spilled: Not applicable for product in purchased form. Wood dust generated from sawing, sanding, drilling, or routing of this product may be vacuumed or shoveled for recovery or disposal. Avoid dusty conditions and provide good ventilation. Use NIOSH approved dust respirator and goggles where ventilation is not possible and the allowable exposure limits may be exceeded.

7. Handling and Storage

Precautions to be Taken In Handling and Storage: No special handling precautions are required for products in purchased form. Avoid repeated or prolonged breathing of wood dust. These products may release very small quantities of formaldehyde in gaseous form. Under foreseeable conditions of use, these products release less than 0.050 ppm in standard large chamber test conditions. Store in well-ventilated, cool, dry place away from open flame.

8. Exposure Control Measures

Personal Protective Equipment:

RESPIRATORY PROTECTION -- Not applicable for product in purchased form. A NIOSH/MSHA-approved dust respirator is recommended when allowable exposure limits may be exceeded.

PROTECTIVE GLOVES -- Not required. However, cloth, canvas, or leather gloves are recommended to minimize potential mechanical irritation from handling product.

EYE PROTECTION -- Not applicable for product in purchased form. Goggles or safety glasses are recommended when machining this product.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT -- Not applicable for product in purchased form. Outer garments may be desirable in extremely dusty areas.

WORK/HYGIENE PRACTICES -- Follow good hygienic and housekeeping practices. Clean up areas where wood dust settles to avoid excessive accumulation of this combustible material. Minimize blowdown or other practices that generate high airborne-dust concentrations.

Ventilation:

LOCAL EXHAUST -- Provide local exhaust as needed so that exposure limits are met.

MECHANICAL (GENERAL) -- Provide general ventilation in processing and storage areas so that exposure limits are met.

SPECIAL -- None.

OTHER -- None.

9. Physical/Chemical Properties

Boiling Point (@ 760 mm Hg):	NAP
Vapor Pressure (mm Hg):	NAP
Vapor Density (air = 1; 1 atm):	NAP
Specific Gravity (H₂O = 1):	Variable; depends on wood species and moisture
Melting Point:	NAP
Evaporation Rate (Butyl acetate = 1):	NAP
Solubility in Water (% by weight):	<0.1%
% Volatile by Volume [@ 70°F (21°C)]:	0
pH:	NAP
Oil-water distribution coefficient:	NAP

9. Physical/Chemical Properties (cont.)

Odor threshold: ND

10. Stability and Reactivity

Stability: () Unstable (x) Stable

Conditions to Avoid: Avoid open flame. Product may ignite at temperatures in excess of 400°F (204°C).

Incompatibility (Materials to Avoid): Avoid contact with oxidizing agents.

Hazardous Decomposition or By-Products: Thermal decomposition products include carbon monoxide, carbon dioxide, aliphatic aldehydes, rosin acids, terpenes, and polycyclic aromatic hydrocarbons.

Hazardous Polymerization: () May occur (x) Will not occur

Sensitivity to Mechanical Impact: NAP

Sensitivity to Static Discharge: NAP

11. Toxicological Information

None available for product in purchased form.

Wood dust (softwood or hardwood) OSHA Hazard Rating = 3.3; moderately toxic with probable oral lethal dose to humans being 0.5-5 g/kg (about 1 pound for a 70 kg or 150 pound person).

Source: *OSHA Regulated Hazardous Substances*, Government Institutes, Inc., February 1990.

12. Ecological Information

No information available at this time.

13. Disposal Considerations

Waste Disposal Method: If disposed of or discarded in its purchased form, incineration is preferable. Dry land disposal is acceptable in most states. It is, however, the user's responsibility to determine at the time of disposal whether your product meets RCRA criteria for hazardous waste. Follow applicable federal, state, local and provincial regulations.

14. Transport Information

Not regulated as a hazardous material by the U.S. Department of Transportation.

Not listed as a hazardous material in Canadian Transportation of Dangerous Goods (TDG) regulations.

15. Regulatory Information

TSCA

The following ingredients are on the TSCA inventory..

Chemicals listed:

Formaldehyde CAS# 50-00-0

15. Regulatory Information (cont.)

DSL

The following ingredients are on the Canadian Domestic Substance List (DSL) inventory.
Chemicals listed:

Formaldehyde CAS# 50-00-0

WHMIS Classification

Not a controlled product

STATE RIGHT-TO KNOW

This product is known to contain any substances subject to the disclosure requirements of:

- California Prop 65 – This product contains formaldehyde which depending on temperature and humidity may be emitted from the product. Formaldehyde is a compound that is known in the State of California to cause cancer. Weyerhaeuser has evaluated formaldehyde emission rates from its products and have found these rates to be below the no significant risk level that would require product warnings.
- New Jersey - Not listed
- Pennsylvania – This product contains formaldehyde which depending on temperature and humidity may be emitted from the product. When cut or otherwise machined, the product may emit wood dust, a listed substance in Pennsylvania.

SARA 313 Information

To the best of our knowledge, this product contains no chemical subject to SARA Title III Section 313 supplier notification requirements.

SARA 311/312 Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under SARA Title III Sections 311 and 312 and is considered, under applicable definitions, to meet the following categories:

- An immediate (acute) health hazard - yes
- A delayed (chronic) health hazard - yes
- A fire hazard - no
- A reactivity hazard - no
- A sudden release hazard - no

16. Additional Information

Date Prepared:- 06/29/01

Date Revised: - 11/06/01

Prepared By: Environment, Health and Safety

User's Responsibility: The information contained in this Material Safety Data Sheet is based on the experience of occupational health and safety professionals and comes from sources believed to be accurate or otherwise technically correct. It is the user's responsibility to determine if this information is suitable for their applications and to follow safety precautions as may be necessary. The user has the responsibility to make sure that this sheet is the most up-to-date issue.

16. Additional Information (cont.)

Definition of Common Terms:

ACGIH	= American Conference of Governmental Industrial Hygienists
C	= Ceiling Limit
CAS#	= Chemical Abstracts System Number
DSL	= Canadian Domestic Substance List
EPA	= U.S. Environmental Protection Agency
IARC	= International Agency for Research on Cancer
LCLo	= Lowest concentration in air resulting in death
LC50	= Concentration in air resulting in death to 50% of experimental animals
LDLo	= Lowest dose resulting in death
LD50	= Administered dose resulting in death to 50% of experimental animals
MSHA	= Mining Safety and Health Administration
ND	= Not Determined
NAP	= Not Applicable
NAV	= Not Available
NIOSH	= National Institute for Occupational Safety and Health
NTP	= National Toxicology Program
OSHA	= Occupational Safety and Health Administration
PEL	= Permissible Exposure Limit
STEL	= Short-Term Exposure Limit (15 minutes)
TDG	= Canadian Transportation of Dangerous Goods
TCLo	= Lowest concentration in air resulting in a toxic effect
TDLo	= Lowest dose resulting in a toxic effect
TLV	= Threshold Limit Value
TWA	= Time-Weighted Average (8 hours)
WHMIS	= Workplace Hazardous Materials Information System