

Manufacturer Name and Address:
Weyerhaeuser Company
Tacoma WA 98477
Emergency Phone: (206) 924-5000
Additional Information: (206) 924-3865

Material Safety Data Sheet

Phenol Formaldehyde (PF) Bonded Products

1 Product Identification

Product	Manufacturing Location
Hardboard Siding	Klamath Falls, OR
Ply Veneer	Springfield, OR
Plywood	Millport, AL; Dierks, AR; Mountain Pine AR; Philadelphia, MS; Plymouth, NC; Wright City, OK; Klamath Falls, OR

Synonyms: Medium Density Siding
Date Prepared: 07/27/89
Date Revised: 05/01/95
Prepared by: Corporate Safety & Health

2 Hazardous Ingredients/Identity Information

Chemical or Common Name CAS#	Percent	OSHA Current Exposure Limits	
Wood CAS# None	84-99	OSHA PEL-TWA	15 mg/m ³ (a)
		OSHA PEL-TWA	5 mg/m ³ (b)
		ACGIH TLV-TWA	5 mg/m ³ (c)
		ACGIH TLV-STEL	10 mg/m ³ (c)
		ACGIH TLV-TWA	1 mg/m ³ (d)
Recommended Exposure Limits¹			
		PEL-TWA ¹	5 mg/m ³ (e)
		PEL-STEL ¹	10 mg/m ³ (e)
		PEL-TWA ¹	2.5 mg/m ³ (f)
² Linerboard (paper fiber/cellulose) CAS# 9004-34-6	17-23	OSHA PEL-TWA	15 mg/m ³ (a)
		OSHA PEL-TWA	5 mg/m ³ (b)
		ACGIH TLV-TWA	10 mg/m ³ (a)
³ Phenol Formaldehyde Resin Solids CAS# None	1-15	OSHA PEL-TWA	0.75 ppm (g)
		OSHA PEL-STEL	2 ppm (g)
		ACGIH TLV Ceiling	0.3 ppm (g)
⁴ Cured Acrylic Paint CAS# None	0-2	OSHA PEL-TWA	None
		ACGIH PEL-TWA	None
⁴ Water-based Primer or Sealer CAS# None	1-2	OSHA PEL-TWA	None
		ACGIH PEL-TWA	None
⁴ Paraffin Wax CAS# 8002-74-2	0-2	OSHA PEL-TWA	2 mg/m ³ (h)
		ACGIH TLV-TWA	2 mg/m ³ (h)
⁴ Top Spray (melamine urea formaldehyde) CAS# None	<1	OSHA PEL-TWA	0.75 ppm (g)
		OSHA PEL-STEL	2 ppm (g)
		ACGIH TLV Ceiling	0.3 ppm (g)

(a) total dust (b) respirable dust fraction
(c) softwood total dust (d) selected hardwood total dust (beech, oak, others)
(e) softwood or hardwood total dust (f) Western red cedar total dust
(g) free gaseous formaldehyde (h) paraffin wax fume

¹Weyerhaeuser 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.

²Ply Veneer
³This product contains less than 0.05% free formaldehyde
⁴Hardboard Siding

Appearance and Odor:

Plywood is a 3-9 ply-veneer product with a slightly aromatic resinous odor and natural wood color. Hardboard siding consists of a ligno cellulosic matrix of interlocking wood fibers, having a slightly aromatic odor and painted surface. Ply Veneer is wood veneer laminated with kraft paper with a slightly aromatic odor. The wood component of these products may consist of alder, aspen, beech, birch, cottonwood, fir, gum, hemlock, hickory, maple, oak, pecan, pine, poplar, spruce, walnut and/or Western red cedar.

3 Physical/Chemical Characteristics

BOILING POINT (1 atm):	NAP
VAPOR PRESSURE (mm Hg):	NAP
VAPOR DENSITY (Air=1; 1 atm):	NAP
SPECIFIC GRAVITY (H ₂ O=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

4 Fire and Explosion Hazard 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. An airborne concentration of 40 grams (40,000 mg) of dust per cubic meter of air is often used as the LEL for wood dust.

5 Reactivity Data

Stability:
() Unstable (x) Stable

Conditions to Avoid:
Avoid open flame. These products 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



6 Precautions for Safe Handling and Use

Steps to be Taken In Case Material Is Released or Spilled:

Not applicable for products in purchased form. Wood dust generated from sawing, sanding, drilling or routing these products may be vacuumed or shoveled for recovery or disposal. Avoid dusty conditions and provide good ventilation. Use NIOSH/MSHA-approved respirator and goggles where ventilation is not possible.

Waste Disposal Method:

If disposed of or discarded in their 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 and local regulations.

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.

Other Precautions:

A NIOSH/MSHA-approved respirator and goggles should be worn when the allowable exposure limits may be exceeded.

7 Health Hazard Data

Primary Health Hazards:

The primary health hazard posed by these products is thought to be due to exposure to wood dust.

Primary Route(s) of Exposure:

- () Ingestion:
- (x) Skin: Dust
- (x) Inhalation: Dust

Acute Health Hazards – Signs and Symptoms of Exposure/

Emergency and First-Aid Procedures:

INGESTION: Not applicable with 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 with 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.

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
- (x) IARC Monographs: Wood Dust
- () OSHA Regulated: Not listed

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.

8 Control Measures

Personal Protective Equipment:

RESPIRATORY PROTECTION – Not applicable for products in purchased form. A NIOSH/MSHA-approved 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 products.

EYE PROTECTION – Not applicable for products in purchased form. Goggles or safety glasses are recommended when machining these products.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT – Not applicable for products 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 as needed so that exposure limits are met.

SPECIAL – Self-contained breathing apparatus (SCBA) recommended when fighting fire.

OTHER – NAP

9 Transportation Data

DOT Proper Shipping Name: Not Regulated

Hazard Class/Division Number:

ID Number:

Packing Group:

Label/Placard Required:

DOT Hazardous Substance:

10 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.

11 Additional Information

Definition of Common Terms:

ACGIH = American Conference of Governmental Industrial Hygienists

C = Ceiling Limit

CAS# = Chemical Abstracts System Number

IARC = International Agency for Research on Cancer

MSHA = Mining Safety and Health Administration

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)

TLV = Threshold Limit Value

TWA = Time-Weighted Average (8 hours)