

HMIS

Health (* potential chronic effects)	1*
Fire Hazard	0
Reactivity	0
Personal Protection – depends on specific use	See Section 8

PRODUCTS: Phenol – Formaldehyde Bonded Plywood Products

Roseburg Forest Products **Date of Preparation: 06/00, Rev. 12/02, Rev. 6/04**

Section 1: General Information

Chemical Name & Synonyms: Softwood Plywood, Marine Plywood, Softwood Plywood Siding, Breckenridge Plywood Siding, Superply Plywood, MDO

Chemical Family: Wood

Formula: Mixture

Manufacturers Name: Roseburg Forest Products

P.O. Box 1088
 Roseburg, Oregon 97470

Prepared by: Roseburg Forest Products and DeEtta Burrows, MSPH, CIH Wise Steps, Inc.

For Information Contact: Quality Assurance Director (541) 679-3311

Section 2: Composition of Ingredients

Chemical Name (Ingredients): Primary Softwood

	PERCENTAGE	OSHA PEL	OSHA STEL	ACGIH TLV-TWA	ACGIH TLV-STEL
Softwood Dust*	87-98%	10 mg/m ³	None	5 mg/m ³	10 mg/m ³
Hardwood Dust	0-11%	10 mg/m ³	None	1 mg/m ³	None
Formaldehyde	Trace <0.1%	0.75 ppm	2 ppm	N/A	0.3 ppm(C)

* except for western red cedar: 2.5 mg/m³ (OSHA) and 0.5 mg/m³ TLV

*Note: OSHA = Occupational Safety & Health Administration
 ACGIH = American Conference of Governmental Industrial Hygienists
 PEL = Permissible Exposure Limit
 TWA = Time Weighted Average
 TLV = Threshold Limit Value – recommended level
 STEL = Short Term Exposure Limit (15-minutes)
 C = Ceiling Limit, never to be exceeded*

Section 3: Toxicology and Health Information

Acute: Wood dust can irritate the eyes and breathing passages. Some wood species may cause skin and respiratory irritation. The irritation is generally caused by mechanical action on the skin or mucous membranes. Chemical effects from some wood species can result in respiratory allergies. Respiratory ailments have included bronchitis, impairment of breathing functions, and asthma. Certain exotic woods contain alkaloids that can cause headache, anorexia, nausea, and difficulty with breathing. These plywood products may release very small quantities of formaldehyde in a gaseous state. Formaldehyde may be irritating to the eyes, nose, throat and skin.

Section 3: Toxicology and Health Information (Continued)

Chronic: 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 hardwood dust has been reported by some scientists to be associated with nasal cancer.

Formaldehyde has been shown to cause cancer in certain laboratory animals at extreme conditions (14 ppm), far above those normally found in the workplace with this product.

Target Organs: Eyes, skin, mucous membranes, upper respiratory tract.

Carcinogenicity Listing: NTP known to be a Human Carcinogen (10th Report), IARC Monographs: Wood dust, Group 1 - 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 hypopharynx, oropharynx, lymphatic and hematopoietic systems, lungs, stomach, colon or rectum.

Formaldehyde: NTP and OSHA – Probable Human Carcinogen, IARC Group 1 for sufficient evidence that formaldehyde causes nasopharyngeal, a rare cancer in humans, and "limited evidence" for cancer of nasal cavity and sinuses, and a "strong but not sufficient evidence" for leukemia. Formaldehyde off-gas levels based on ASTM E-133 have shown an average concentration of 0.09 ppm with a standard deviation of 0.04.

Medical Conditions That May Be Aggravated by Exposure: Wood dust may aggravate preexisting respiratory conditions or allergies. Formaldehyde may aggravate existing respiratory problems and cause allergies to susceptible persons.

Routes of Entry: Inhalation and skin contact

Section 4: Emergency First Aid

Inhalation: Remove from area to fresh air. Seek medical attention if persistent irritation, severe coughing or breathing difficulty occurs.

Eye Contact: Immediately flush eyes with copious amounts of water for at least 15 minutes. Assure adequate flushing of the eyes by separating the eyelids with fingers. Seek medical care if irritation persists.

Skin Contact: Wood dust of certain species may elicit allergic contact dermatitis in sensitized individuals and can cause mechanical irritation. Wash affected areas with soap and water. Seek medical attention if rash, irritation or dermatitis persists.

Ingestion: Not applicable under normal use.

Section 5: Fire and Explosion Hazard

Flash point (Method Used)	Flammable limits	LEL	UEL
Not Applicable		Not Applicable	Not Applicable

Extinguishing Media: Water, carbon dioxide, sand, and chemical extinguishers.

Special Fire Fighting Procedures

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

Unusual Fire & Explosion: Wood dust from sawing, sanding, or machining can be explosive in the presence of an ignition source depending on particle size and moisture content. Airborne concentrations of 40 grams per cubic meter is often used as the lower explosive limit (LEL) for wood dusts. OSHA interprets the explosive level as having no visibility within five feet or less.

Section 6: Accidental Release Measures

Steps to be Taken in Case Material is Released or Spilled: Not applicable for products in purchased form. Wood dust generated from sawing, sanding, or machining may be vacuumed or shoveled for recovery or disposal. Avoid dusty conditions and provide good ventilation. Use NIOSH/MSHA-approved respiratory protection and goggles where exposure limits may be exceeded.

Section 7: Storage and Handling

Storage Precautions: No special storage precautions. Handling can result in wood splinters.

Other Precautions: Avoid repeated or prolonged inhalation of wood dust. No special handling precautions are warranted for products in purchased form.

Section 8: Exposure Controls & Personal Protection

Required Ventilation: Provide local exhaust ventilation as needed so that exposures are below exposure limits.

Respiratory Protection: Generally would not be needed for products in purchased form. Use a NIOSH/MSHA approved respirator for dust/formaldehyde when the allowable exposure limits may be exceeded.

Protective Gloves: Not required. Cloth, canvas or leather gloves are recommended for protection against mechanical irritation and wood splinters.

Eye Protection: Goggles or safety glasses are recommended when cutting, sawing, or sanding the product.

Other: None required for product in purchased form. Other protective equipment, such as gloves and outer garments, may be needed depending on dust conditions.

Section 9: Physical & Chemical Properties

Boiling Point (F⁰): Not applicable

Solubility in Water: Not applicable

Vapor Pressure (MM Hg): Not applicable

pH: Not applicable

% Volatiles by Volume (@70°F(21°C)): 0

Evaporation Rate: Not applicable

Vapor Density (air =1): Not applicable

Spec Gravity (H₂O=1): 0.40-0.80, variable depends on wood species and moisture

Section 10: Stability and Reactivity

Stability: Stable

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

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide, aliphatic aldehydes, rosin acids, terpenes, and polycyclic aromatic hydrocarbons.

Section 11: Toxicological Information

Data not available for product in purchased form. Individual component information is listed below if available.

Wood dust (softwood or hardwood) OSHA Hazard Rating = 3.3; moderately toxic with probable oral lethal dose to humans being 0.5-5g/kg (about 1 pound for a 70 kg or 150 pound person) Source: OSHA Regulated Hazardous Substances, Government Institutes. Inc., February 1990.

Section 12: Ecological Information

No information available at this time. As with all foreign substances do not allow to enter the storm drainage systems.

Section 13: Waste Disposal

Follow safe solid waste disposal guidelines in accordance with federal, state and local regulations. If disposed of or discarded in its purchased form, incineration is the preferred method. 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.

Section 14: Transportation Information

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

Section 15: Regulatory Information

It is the user's responsibility to determine what regulatory information is relevant dependant upon the usage of this product.

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 and Wood Dust (as of 12/02 because of the NTP listing) are on California's list of chemicals known to the State to cause cancer.

Section 16 Other Information

HMIS Hazard Rating (0- Insignificant, 1- Slight, 2- Moderate, 3- High, 4- Extreme)
Health – 1* (potential chronic health effects from overexposures) Flammability - 0
Reactivity - 0 Personal Protective Equipment – Depends on use conditions see Section 8.

Disclaimer

Roseburg Forest Products believes 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, Roseburg Forest Products makes no warranty, 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, and federal regulations concerning use of this product. It is the further responsibility of the buyer to research and understand safe methods of storing, handling and disposal of this product.