Safety Data Sheet (SDS)

Weyerhaeuser

TJI® Joist

1. Identification

TRADE NAME(S):	TJI® Joist
SYNONYMS and/or GRADES:	None
PRODUCT USES:	Building Materials
CHEMICAL NAME/CLASS:	Wood Products
MANUFACTURER'S NAME:	Weyerhaeuser
ADDRESS:	220 Occidental Ave S., Seattle, WA 98014
EMERGENCY PHONE (DOT):	(844) 523-4081 (3E Company)
BUSINESS PHONE:	(206) 539-3910
INTERNET ACCESS:	See section 16
REVISED DATE:	September 15, 2016

2. Hazard(s) Identification

Signal Word: DANGER

NOTE: This product is not hazardous in the form in which it is shipped by the manufacturer but may become hazardous as the result of downstream activities (e.g. cutting, sanding) which creates small particles resulting in the potential hazards as described below.

Classification	Hazard Statement(s)	Pictogram(s)
HEALTH Carcinogen- Category 1A (H350)*	Wood dust may cause nasopharyngeal cancer and/or cancer of the nasal cavities and paranasal sinuses by inhalation	

2. Hazard(s) Identification (cont'd.)

Skin Irritation Category 2 (H315) Specific Target Organ Toxicity- Single Exposure (STOT) Category-3 (H335)	May cause skin irritation May cause respiratory irritation	
Eye Irritation Category 2B (H320)	Causes eye irritation	None
Combustible Dust (OSHA Defined Hazard)	If converted to small particles during further processing, handling, or by other means, may form combustible dust concentrations in air	None

*Hazard codes (GHS)

HMIS Rating (Scale 0-4):	**Health =** 2*	**Fire =** 1	**Physical Hazard =** 0
NFPA Rating (Scale 0-4):	**Health =** 1	**Fire =** 1	**Reactivity =** 0

Precautionary Statement(s):

Prevention Statements:

P210: Keep away from sparks, flame or other heat sources.
P243: Take precautionary measures against static discharge.
P260 and P261: Avoid breathing dust.
P280: Wear appropriate protective equipment for skin exposure. In case of inadequate ventilation wear an approved respirator suitable for conditions of use.
P362 and P363: Take off contaminated clothing and wash before reuse.

Response Statements:

P304 and P340: If inhaled and breathing becomes difficult, remove person to fresh air and keep comfortable for breathing.
P308 and P313: If experiencing respiratory symptoms, following removal to fresh air, call a doctor or other qualified medical professional.
P313: If skin irritation or rash occurs get medical advice/attention.
P362: Wash contaminated clothing before reuse.
P352 and P264: If on skin wash with plenty of soap and water.
P338 and P351: If in eyes, rinse cautiously for several minutes. Remove contact lenses if present and easy to do so.

Disposal:

P501: Dispose of in accordance with federal, state and local regulations.

Ingredients of Unknown Acute Toxicity (>1%): NAP

3. Composition/Information on Ingredients

Ingredients	CAS#	Wt.%
Wood (wood dust, softwood or hardwood)	None	91-95
Resin Solids: Polymeric Phenol-Formaldehyde [1] ($C_7H_6O_2$)	9003-35-4	1-9
Polymeric Diphenylmethane Diisocyanate [2] $[C_6H_3(NCO)CH_2]n$	9016-87-9	4-6
Paraffin Wax[3]	8002-74-2	0.1-1

Common names: [1] Phenol-formaldehyde resin; [2] Polymeric MDI; [3] Hydrocarbon waxes, synthetic wax.

4. First Aid Measures

Inhalation: Remove to fresh air if respiratory symptoms are experienced. Seek medical help if persistent irritation, severe coughing, breathing difficulty or other serious symptoms occur.

Eye Contact: Treat dust in eye as a foreign object. Flush with water to remove dust particles. Remove contact lenses if present and easy to do so. Avoid touching or rubbing eyes to avoid further irritation or injury. Seek medical help if irritation persists.

Skin Contact: Wood dust may elicit contact dermatitis. Seek medical help if rash, irritation or dermatitis persists.

Skin Absorption: Not known to be absorbed through the skin.

Ingestion: Not applicable under normal use.

Symptoms or Effects:

Acute Symptoms/Effects – Wood dust may cause mechanical and/or chemical irritation of the respiratory system. Wood dust can cause physical obstructions in the nasal passages, resulting in dryness of nose, dry cough, and sneezing. Wood dust may cause mechanical irritation of the eyes.

Delayed Symptoms/Effects – Unique delayed effects are not anticipated after exposure. See Section 11 for additional information on chronic effects.

5. Fire-fighting Measures

Extinguishing Media and Restrictions: Water, carbon dioxide and sand.

Specific Hazards, Anticipated Combustion Products: Natural decomposition of organic materials such as wood may produce toxic gases and an oxygen deficient atmosphere in enclosed or poorly ventilated areas. Thermal decomposition (i.e. smoldering, burning) products include carbon monoxide, carbon dioxide, aliphatic aldehydes, including formaldehyde, resin acids, terpenes, and polycyclic aromatic hydrocarbons.

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

Special Firefighting Equipment/Procedures: No special equipment anticipated. Beware of potential combustible dust explosion hazard.

Unusual Fire and Explosion Hazards: Depending on moisture content and more importantly, particle diameter and airborne concentration, wood and resin dust may explode in the presence of an ignition source. Wood dust may similarly deflagrate (combustion without detonation like an explosion) if ignited in an open or loosely contained area. An airborne concentration of 40 grams (40,000 mg) of dust per cubic meter of air is often used as the LEL for wood dusts. Reference NFPA Standards 654, 664 and the NFPA *Fire Protection Handbook* for guidance. Ventilation systems should be kept clean and precautions should be taken to prevent sparks or other ignition sources.

6. Accidental Release Measures

Steps to be taken in case Material Is Released or Spilled: Sweep or vacuum up for recovery and disposal. Avoid creating dusty conditions whenever feasible. Maintain good housekeeping to avoid accumulation of wood and resin dust on exposed surfaces. Use approved filtering face piece respirator ("dust mask") or higher levels of respiratory protection as indicated and goggles where ventilation is not possible and exposure limits may be exceeded or for additional worker comfort.

7. Handling and Storage

Precautions to be taken in Handling and Storage: Dried wood and resin dust may pose a combustible dust hazard. Keep away from ignition sources. Avoid eye contact. Avoid prolonged or repeated contact with skin. Avoid prolonged or repeated breathing of wood dust. These products may release some formaldehyde in gaseous form. Specific handling and storage conditions should be assessed to determine potential formaldehyde concentrations. Store in well-ventilated, cool, dry place away from open flame.

8. Exposure Control Measures/Personal Protection

Exposure Limits/Guidelines:

Ingredient(s)	Agency	Exposure Limit(s)	Comments
Wood (wood dust, softwood and hardwood)	OSHA	PEL-TWA 15 mg/m^3 (see footnote [A] below)	Total dust (PNOR)
	OSHA	PEL-TWA 5 mg/m^3 (see footnote [A] below)	Respirable dust fraction (PNOR)
	ACGIH	TLV-TWA 1 mg/m^3	Inhalable fraction
Resin Solids: Polymeric phenol-formaldehyde [B]	OSHA OSHA	PEL-TWA 0.75 ppm PEL-STEL 2 ppm	Free gaseous formaldehyde
	ACGIH	TLV- (C) 0.3 ppm	Ceiling limit
Polymeric Diphenylmethane Diisocyanate [C]	OSHA ACGIH	None None	
Paraffin wax	OSHA ACGIH	PEL-TWA 2 mg/m^3 TLV-TWA 2 mg/m^3	Paraffin wax fume Paraffin wax fume

[A] In AFL-CIO v OSHA, 965 F. 2d 962 (11th Cir. 1992), the Court overturned OSHA's 1989 Air Contaminants Rule, including the specific PEL's for wood dust that OSHA had established at that time. The 1989 vacated PEL's were: 5 mg/m^3 PEL-TWA and 10 mg/m^3 STEL (15 min), all softwood and hardwood except Western Red Cedar. Wood dust is now regulated by OSHA as "Particulates Not Otherwise Regulated" (PNOR), which is also referred to as "nuisance dust". However, some states have regulated wood dust PEL's in their state plans. Additionally, OSHA indicated that it may cite employers under the OSH Act general duty clause in appropriate circumstances.

[B] These products may contain free formaldehyde (<0.1%, wt. %), which may be released depending on concentration and environmental conditions. These panels contain no added urea-formaldehyde resins. Large scale chamber studies on similar materials conducted by the APA Engineered Wood Association have shown that the finished products off-gas levels below 0.1 ppm.

[C] This ingredient is the polymerized form of MDI resin.

8. Exposure Control Measures/Personal Protection (cont'd.)

Ventilation:

LOCAL EXHAUST – Provide local exhaust as needed so that exposure limits are met. Ventilation to control dust should be considered where potential explosive concentrations and ignition sources are present. The design and operation of any exhaust system should consider the possibility of explosive concentrations of wood dust within the system. See "SPECIAL" section below. Use of tool mounted exhaust systems should also be considered, especially when working in enclosed areas.

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

SPECIAL – Ensure that exhaust ventilation and material transport systems involved in handling this product contain explosion relief vents or suppression systems designed and operated in accordance with applicable standards if the operating conditions justify their use.

OTHER ENGINEERING CONTROLS – Cutting and machining of product should preferably be done outdoors or with adequate ventilation and containment.

Personal Protective Equipment:

RESPIRATORY PROTECTION – Use filtering face piece respirator ("dust mask") tested and approved under appropriate government standards such as NIOSH (US),CSA (Canada), CEN (EU), or JIS (Japan) where ventilation is not possible and exposure limits may be exceeded or for additional worker comfort or symptom relief. Use respiratory protection in accordance with jurisdictional regulatory requirements similar to the OSHA respiratory protection standard 29CFR 1910.134 following a determination of risk from potential exposures.

EYE PROTECTION – Approved goggles or tight fitting safety glasses are recommended when excessive exposures to dust may occur (e.g. during clean up) and when eye irritation may occur.

PROTECTIVE GLOVES – Cloth, canvas, or leather gloves are recommended to minimize potential slivers or mechanical irritation from handling product.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT – Outer garments which cover the arms may be desirable in extremely dusty areas.

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

9. Physical/Chemical Properties

Appearance: TJI® Joist consists of a ligno cellulosic matrix of resin-bound interlocking wood fibers having a characteristic wood 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 and walnut.

Odor/Odor Threshold(s):	NAV
pH:	NAP
Melting/Freezing Point:	NAP
Boiling Point (@ 760 mm Hg) and Range:	NAP
Flash Point:	NAP
Evaporation Rate:	0
Flammability:	NAP
Lower/Upper Explosive Limits:	40,000 mg of dust per cubic meter of air is often used as the LEL for wood dusts.
Vapor Pressure (mm Hg):	NAP
Vapor Density (air = 1; 1 atm):	NAP
Relative Density:	NAP
Solubility:	<0.1

9. Physical/Chemical Properties (cont'd.)

Partition Coefficient (n-octonal/water):	NAP
Autoignition Temperature:	Variable [typically 400°-500°F (204°-260°C)]
Decomposition Temperature:	NAV
Viscosity:	NAP
Other Properties:	NAP

10. Stability and Reactivity

Reactivity: NAP
Hazardous Polymerization: ☐ May occur ☒ Will not occur
Stability: ☐ Unstable ☒ 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 and drying oils.
Hazardous Decomposition or By-Products: Thermal decomposition (i.e. smoldering, burning) can release carbon monoxide, oxides of nitrogen, carbon dioxide, aliphatic aldehydes including formaldehyde, resin acids, terpenes and polycyclic aromatic hydrocarbons. Natural decomposition of organic materials such as wood may produce toxic gases and an oxygen deficient atmosphere in enclosed or poorly ventilated areas. Spontaneous and rapid hazardous decomposition will not occur.
Sensitivity to Static Discharge: Airborne wood dust may be ignited by a static discharge depending on airborne concentrations, particle size and moisture content.

11. Toxicological Information

Likely Route(s) of Exposure:
- ☐ Ingestion:
- ☒ Skin: Dust
- ☒ Inhalation: Dust
- ☒ Eye: Dust

Signs and Symptoms of Exposure:
Wood Dust – NTP: According to its Report on Carcinogens, Thirteenth Edition, NTP states, "Wood dust is known to be a human carcinogen based on sufficient evidence of carcinogenicity from studies in humans". An association between wood dust exposure and cancer of the nasal cavity has been observed in many case reports, cohort studies, and case-control studies that specifically addressed nasal cancer. Associations with cancer of the nasal cavities and paranasal sinuses were observed both in studies of people whose occupations are associated with wood dust exposure and in studies that directly estimated wood dust exposure. This classification is based primarily on increased risk in the occurrence of adenocarcinomas of the nasal cavities and paranasal sinuses associated with exposure to wood dust. The evaluation did not find sufficient evidence to associate cancers of the oropharynx, hypopharynx, lung, lymphatic and hematopoietic systems, stomach, colon or rectum with exposure to wood dust. There is inadequate evidence for the carcinogenicity of wood dust from studies in experimental animals according to NTP.
Wood Dust: 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 to 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.
Formaldehyde – NTP: According to its Report on Carcinogens, Thirteenth Edition, NTP states, Formaldehyde (gas) is known to be a human carcinogen based on sufficient evidence of carcinogenicity from studies in humans and supporting data on mechanisms of carcinogenesis.

11. Toxicological Information (cont'd.)

Formaldehyde: IARC – Group 1: Carcinogenic to humans, sufficient evidence of carcinogenicity. A working group of IARC has determined that there is sufficient evidence that formaldehyde causes nasopharyngeal cancer in humans, a rare cancer in developed countries and "strong but not sufficient evidence" for leukemia. However, numerous epidemiological studies have failed to demonstrate a relationship between formaldehyde exposure and nasal cancer or pulmonary diseases such as emphysema or lung cancer.

Carcinogenicity Listing(s):

☒	NTP:	Wood dust, Known Human Carcinogen. Formaldehyde, Known to be a Human Carcinogen.
☒	IARC Monographs:	Wood dust, Group 1 – carcinogenic to humans. Formaldehyde, Group 1- carcinogenic to humans.
☒	OSHA Regulated:	Formaldehyde Gas

Toxicity Data: No specific information available for product in purchased form. Individual component information is listed below.

Components:

Wood dust (softwood or hardwood)

Dusts generated from sawing, sanding or machining the product may cause respiratory irritation, nasal dryness and irritation, coughing and sinusitis. NTP and IARC (Group 1) classify wood dust as a human carcinogen. See Section 2 above.

Formaldehyde

Human inhalation TC_{Lo} of 17 mg/m^3 for 30 minutes produced eye and pulmonary results; human inhalation TC_{Lo} of 300 ug/m^3 produced nose and central nervous system results; LC_{50} (rat, inhalation) = 1,000 mg/m^3, 30 minutes; LC_{50} (mice, inhalation) = 400 mg/m^3, 2 hours. NTP and IARC (Group 1) classify formaldehyde as a human carcinogen. See Section 2 above.

Target Organs: Eyes, skin, and respiratory system.

Note: Weyerhaeuser evaluated the studies referenced in the ACGIH® TLV® Documentation for Wood Dust and others which included potential allergenic references for wood species which may cause skin or respiratory sensitization. There are a limited number of studies of highly variable consistency which reference sensitization from some species of wood. When the total weight of evidence is considered this product is considered to be an eye, skin and repository irritant and not a respiratory or skin sensitizer according to health hazard classification criteria.

12. Ecological Information

Ecotoxicity: NAV for finished product.

Formaldehyde component:

96 hr LC_{50} Fathead Minnow	24 mg/L
96 hr LC_{50} Bluegill	0.10 mg/L
5 min EC_{50} Photobacterium phosphoreum	9 mg/L
96 hr EC_{50} Water flea	20 mg/L

Biopersistance and Degradability: The wood and resin portions of this product would be expected to be biodegradable.

Formaldehyde

Trace amounts of free formaldehyde may be released to the atmosphere and would be expected to be removed in the atmosphere by direct photolysis and oxidation by photochemically produced hydroxyl radicals (half-life of a few hours). In the aqueous phase formaldehyde biodegradation is expected to take place in a few days.

12. Ecological Information (cont'd.)

Polymeric MDI

The effects from a simulated accidental pollution event in a pond with polymeric MDI on different trophic levels of the aquatic ecosystem were investigated (Heimbach F. et.al., 1996). Neither monomeric MDI nor its potential reaction product MDA (4, 4'-diphenylmethanediamine) was detected in water or accumulated by fish. The MDI polymerized to inert polyurea on the sediment of the test ponds. This polymerization formed carbon dioxide, released as bubbles which floated to the water surface. There was no direct effect on the pelagic community (phytoplankton, zooplankton, fish, and macrophytes) of the test ponds. The atmospheric concentration of MDI arising from a release is naturally low on account of MDI's very low volatility. It is expected that airborne MDI will have a rather short half-life as a consequence of ready degradation to inorganic compounds by hydroxyl radicals present in the troposphere.

Bioaccumulation: NAV
Soil Mobility: NAV
Other adverse effects: NAP

13. Disposal Considerations

Waste Disposal Method: Dry land disposal or incineration is acceptable in most areas. It is, however, the user's responsibility to determine at the time of disposal whether your waste meets any jurisdictional criteria. Note that wood dust may pose a combustible dust hazard.

14. Transport Information

Mode: (air, land, water) 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. Not regulated as a hazardous material by IMDG or IATA regulations concerning the transport of hazardous materials.

UN Proper Shipping Name:	NAP
UN/NA ID Number:	NAP
Hazard Class:	NAP
Packing Group:	NAP
Environmental Hazards (Marine Pollutant):	NAP
Special precautions:	NAP

15. Regulatory Information

TSCA: Phenol-formaldehyde resin, polymeric diphenylmethane diisocyanate and paraffin wax are on the TSCA inventory.
CERCLA: Formaldehyde (100 lbs. RQ) is on the CERCLA chemical substance inventory.
DSL: Formaldehyde, polymeric diphenylmethane diisocyanate and paraffin wax are on the DSL.
OSHA: Wood products are not hazardous under the criteria of the federal OSHA Hazard Communication Standard 29 CFR 1910.1200. However, wood and resin dust generated by sawing, sanding or machining this product may be hazardous. Workplace exposure to formaldehyde is specifically regulated under 29 CFR 1910.1048.

15. Regulatory Information (cont'd.)

STATE RIGHT-TO-KNOW:

California Proposition 65 – This product contains formaldehyde, which depending on temperature and humidity, may be emitted from the product. Weyerhaeuser has evaluated formaldehyde emission rates from its products and have found these rates to be below the significant risk level. The user should determine whether formaldehyde emissions resulting from its site specific use, handling, ventilation design, capacity and final construction design for this product could exceed the safe harbor level.

WARNING: Drilling, sawing, sanding or machining wood products generates wood dust, a substance known to the State of California to cause cancer.

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. Formaldehyde and wood dust appear on Pennsylvania's Appendix A, Hazardous Substance List.

New Jersey – 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. Formaldehyde and wood dust appear on New Jersey's Environmental Hazardous Substance List.

Minnesota – Minnesota Statutes, 1984, Sections 144.495 and 325F.181 do not apply to this product; these statues apply to plywood, particleboard and MDF and other products manufactured with urea-formaldehyde resins.

SARA 313 Information: To the best of our knowledge, this product contains formaldehyde at de minimis concentrations (<0.1%) and is not subjected to the SARA Title III Section 313 supplier notification requirements.

SARA 311/312 Hazard Category: This product has been reviewed according 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 corrosive hazard	No
A fire hazard	No
A reactivity hazard	No
A sudden release hazard	No

FDA: Not intended for use as a food additive or indirect food contact item.

WHMIS Classification: Wood and products made from wood are exempt from WHMIS per the Hazardous Products Act. However, wood dust is considered to be a controlled product: D2A (wood dust and formaldehyde: IARC Group 1).

16. Other Information

Date Prepared: 08/30/2012
Date Revised: 09/15/2016
Prepared By: Weyerhaeuser Company Health and Safety.
Weyerhaeuser SDS available on:
http://www.wy.com/sustainability/environment/product-stewardship/safety-data-sheets/

User's Responsibility: The information contained in this 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 the product is suitable for its proposed application(s) and to follow necessary safety precautions. The user has the responsibility to ensure that the most current SDS is used.

16. Other Information (cont'd.)

Definition of Terms

ACGIH®	=	American Conference of Governmental Industrial Hygienists
C	=	Ceiling Limit
CAS#	=	Chemical Abstracts System Number
DOT	=	U. S. Department of Transportation
DSL	=	Domestic Substance List
EC#	=	Identifying Number Assigned to Chemicals Contained in the European Inventory of Existing Chemical Substances (EINECS)
EC_{50}	=	Effective Concentration That Inhibits the Endpoint to 50% of Control Population
EPA	=	U.S. Environmental Protection Agency
GHS	=	Globally Harmonized System of Classification and Labelling of Chemicals
HMIS	=	(Canada) Hazardous Materials Identification System
IARC	=	International Agency for Research on Cancer
IATA	=	International Air Transport Association
IMDG	=	International Maritime Dangerous Goods
LC_{50}	=	Concentration in Air Resulting in Death To 50% of Experimental Animals
LCLo	=	Lowest Concentration in Air Resulting in Death
LD_{50}	=	Administered Dose Resulting in Death to 50% of Experimental Animals
LDLo	=	Lowest Dose Resulting in Death
LEL	=	Lower Explosive Limit
LFL	=	Lower Flammable Limit
MSHA	=	Mine Safety and Health Administration
NAP	=	Not Applicable
NAV	=	Not Available
NIOSH	=	National Institute for Occupational Safety and Health
NFPA	=	National Fire Protection Association
NPRI	=	(Canada) National Pollution Release Inventory
NTP	=	National Toxicology Program
OSHA	=	Occupational Safety and Health Administration
PEL	=	Permissible Exposure Limit
PNOR	=	Particulate Not Otherwise Regulated
PNOS	=	Particulate Not Otherwise Specified
RCRA	=	Resource Conservation and Recovery Act
STEL	=	Short-Term Exposure Limit (15 minutes)
STP	=	Standard Temperature and Pressure
TCLo	=	Lowest Concentration in Air Resulting in a Toxic Effect
TDG	=	(Canada) Transportation of Dangerous Goods
TDLo	=	Lowest Dose Resulting In a Toxic Effect
TLV	=	Threshold Limit Value
TSCA	=	Toxic Substance Control Act
TWA	=	Time-Weighted Average (8 hours)
UFL	=	Upper Flammable Limit
WHMIS	=	(Canada) Workplace Hazardous Materials Information System

TJI® Joist

Danger

Wood dust may cause nasopharyngeal cancer and/or cancer of the nasal cavities and paranasal sinuses by inhalation. May cause respiratory, skin and eye irritation.

May form combustible dust concentrations in air if small particles are formed during processing or handling.

Precautions: Avoid breathing dust and wear appropriate protective equipment for respiratory, skin or eye exposures. Prevent dust release and accumulations to minimize hazards. Take off contaminated clothing and wash before reuse. Keep dust away from ignition sources such as heat, sparks, and flame.

First Aid: If on skin wash with plenty of mild soap and water. If in eyes, rinse cautiously for several minutes. Remove contact lenses if present and easy to do so. If experiencing respiratory symptoms, remove to fresh air. Contact a qualified medical professional for serious or persistent skin, eye or respiratory symptoms.

Weyerhaeuser

220 Occidental Ave S.

Seattle, WA 98104

1-800-525-5440

Weyerhaeuser

Label for TJI Joist products. See SDS 9/2016 for additional information.

Safety Data Sheet (SDS)

Weyerhaeuser

Microllam®Laminated Veneer Lumber (LVL) and Microllam®Laminated Veneer Lumber (LVL) with Watershed™ Stability Overlay (WSO)

1. Identification

TRADE NAME(S):	Microllam®Laminated Veneer Lumber (LVL) and Microllam®Laminated Veneer Lumber (LVL) with Watershed™ Stability Overlay (WSO)
SYNONYMS and/or GRADES:	Microllam® LVL; Microllam ®LVL with WSO; LVL beam
PRODUCT USES:	Building Materials
CHEMICAL NAME/CLASS:	Wood Products
MANUFACTURER'S NAME:	Weyerhaeuser
ADDRESS:	220 Occidental Ave S., Seattle, WA 98104
EMERGENCY PHONE (DOT):	(844) 523-4081 (3E Company)
BUSINESS PHONE:	(206) 539-3910
INTERNET ACCESS:	See section 16
REVISED DATE:	August 27, 2018

2. Hazard(s) Identification

Signal Word: DANGER

NOTE: These products are not hazardous in the form in which it is shipped by the manufacturer but may become hazardous as the result of downstream activities (e.g. cutting, sanding) which creates small particles resulting in the potential hazards as described below.

Classification	Hazard Statement(s)	Pictogram(s)
HEALTH Carcinogen-Category 1A (H350) *	Wood dust may cause nasopharyngeal cancer and/or cancer of the nasal cavities and paranasal sinuses by inhalation	

2. Hazard(s) Identification (cont'd.)

Skin Irritation Category 2 (H315) Specific Target Organ Toxicity-Single Exposure (STOT) Category 3 (H335)	Causes skin irritation May cause respiratory irritation	
Eye Irritation Category 2B (H320)	Causes eye irritation	None
Combustible Dust (OSHA Defined Hazard)	If converted to small particles during further processing, handling, or by other means, may form combustible dust concentrations in air	None

*Hazard codes (GHS)

HMIS Rating (Scale 0-4):	**Health =** 2*	**Fire =** 1	**Physical Hazard =** 0
NFPA Rating (Scale 0-4):	**Health =** 1	**Fire =** 1	**Reactivity =** 0

Precautionary Statement(s):

Prevention Statements:

P202: Do not handle until all safety precautions have been read and understood.
P210: Keep away from sparks, flame or other heat sources.
P243: Take precautionary measures against static discharge.
P261+284: Avoid breathing dust. In case of inadequate ventilation wear an approved respirator suitable for conditions of use.
P271: Use outdoors or in a well-ventilated area.
P280: Wear appropriate protective equipment for eye and skin exposure.

Response Statements:

P304+P340+P313: If inhaled and breathing becomes difficult, remove person to fresh air and keep comfortable for breathing. If symptoms persist, call a doctor or other qualified medical professional.
P333+P313: If skin irritation or rash occurs get medical advice/attention.
P352+P264: If on skin wash with plenty of soap and water.
P362+P364: Take off contaminated clothing and wash before reuse.
P305+P351+P338: If in eyes, rinse cautiously for several minutes. Remove contact lenses if present and easy to do so.

Disposal:

P501: Dispose of in accordance with federal, state and local regulations.

Ingredients of Unknown Acute Toxicity (>1%): NAP

3. Composition/Information on Ingredients

Ingredients	CAS#	Wt.%
Wood (wood dust, softwood or hardwood)	None	90-99
Resin Solids: Polymeric Phenol-Formaldehyde [1] (reacted)	9003-35-4	1-9
Paraffin Wax[2]	8002-74-2	0-2
Resin Coated Paper (WSO product only)	None	0.8-1.1

Common names: [1] Phenol-formaldehyde resin; PF Resin. [2] Hydrocarbon waxes, synthetic wax.

4. First Aid Measures

Inhalation: Remove to fresh air if respiratory symptoms are experienced. Seek medical help if persistent irritation, severe coughing, breathing difficulty or other serious symptoms occur.

Eye Contact: Treat dust in eye as a foreign object. Flush with water to remove dust particles. Remove contact lenses if present and easy to do so. Avoid touching or rubbing eyes to avoid further irritation or injury. Seek medical help if irritation persists.

Skin Contact: Wood dust may elicit contact dermatitis. Seek medical help if rash, irritation or dermatitis persists.

Skin Absorption: Not known to be absorbed through the skin.

Ingestion: Not applicable under normal use.

Symptoms or Effects:

Acute Symptoms/Effects – Dust may cause mechanical and/or chemical irritation of the respiratory system. Dust can cause physical obstructions in the nasal passages, resulting in dryness of nose, dry cough, and sneezing. Dust may cause mechanical irritation of the eyes.

Delayed Symptoms/Effects – Unique delayed effects are not anticipated after exposure. See Section 11 for additional information on chronic effects.

5. Fire-fighting Measures

Extinguishing Media and Restrictions: Water, carbon dioxide and sand.

Specific Hazards, Anticipated Combustion Products: Thermal decomposition (i.e. smoldering, burning) products include carbon monoxide, carbon dioxide, aliphatic aldehydes, oxides of nitrogen, hydrogen cyanide, resin acids, terpenes, and polycyclic aromatic hydrocarbons.

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

Special Firefighting Equipment/Procedures: No special equipment anticipated. Beware of potential combustible dust explosion hazard.

Unusual Fire and Explosion Hazards: Depending on moisture content, particle diameter and concentration, wood and resin dust may pose a flash fire or deflagration hazard. If suspended in air in an enclosure or container and ignited, an explosion may occur due to the development of internal pressure causing rupture. An airborne concentration of 40 grams (40,000 mg) of dust per cubic meter of air is often used as the Minimum Explosible Concentration (MEC) for wood dusts. Conduct regular housekeeping inspections and cleaning to prevent excessive dust accumulations. Design and maintain control equipment to minimize fugitive combustible dust emissions. Ensure that ventilation systems are operating properly to capture, transport and contain combustible dust while controlling ignition sources. Reference NFPA 652 "Standard on the Fundamentals of Combustible Dust".

6. Accidental Release Measures

Steps to be taken in case Material Is Released or Spilled: Sweep or vacuum up for recovery and disposal. Avoid creating dusty conditions whenever feasible. Maintain good housekeeping to avoid accumulation of wood and resin dust on exposed surfaces. Use approved filtering face piece respirator ("dust mask") or higher levels of respiratory protection as indicated and goggles where ventilation is not possible and exposure limits may be exceeded or for additional worker comfort.

7. Handling and Storage

Precautions to be taken in Handling and Storage: Dried wood and resin dust may pose a combustible dust hazard. Keep away from ignition sources. Avoid eye contact. Avoid prolonged or repeated contact with skin. Avoid prolonged or repeated breathing of wood dust. Store in well-ventilated, cool, dry place away from open flame.

8. Exposure Control Measures/Personal Protection

Exposure Limits/Guidelines:

Ingredient(s)	Agency	Exposure Limit(s)	Comments
Wood (wood dust, softwood and hardwood)	OSHA	PEL-TWA 15 mg/m^3 (see footnote [A] below)	Total dust (PNOR)
	OSHA	PEL-TWA 5 mg/m^3 (see footnote [A] below)	Respirable dust fraction (PNOR)
	ACGIH	TLV-TWA 1 mg/m^3	Inhalable fraction
Resin Solids: Polymeric phenol-formaldehyde [B]	OSHA OSHA	PEL-TWA 0.75 ppm PEL-STEL 2 ppm	Free gaseous formaldehyde
	ACGIH ACGIH	TLV-TWA 0.1 ppm TLV-STEL 0.3 ppm	
Paraffin wax	OSHA ACGIH	PEL-TWA 2 mg/m^3 TLV-TWA 2 mg/m^3	Paraffin wax fume Paraffin wax fume

[A] In AFL-CIO v OSHA, 965 F. 2d 962 (11th Cir. 1992), the Court overturned OSHA's 1989 Air Contaminants Rule, including the specific PEL's for wood dust that OSHA had established at that time. The 1989 vacated PEL's were: 5 mg/m^3 PEL-TWA and 10 mg/m^3 STEL (15 min), all softwood and hardwood except Western Red Cedar. Wood dust is now regulated by OSHA as "Particulates Not Otherwise Regulated" (PNOR), which is also referred to as "nuisance dust". However, some states have regulated wood dust PEL's in their state plans. Additionally, OSHA indicated that it may cite employers under the OSH Act general duty clause in appropriate circumstances.

[B] These products may contain free formaldehyde (<0.1%, wt. %), which may be released depending on concentration and environmental conditions. These products contain no added urea-formaldehyde resins.

Ventilation:

LOCAL EXHAUST – Provide local exhaust as needed so that exposure limits are met. Ventilation to control dust should be considered where potential explosive concentrations and ignition sources are present. The design and operation of any exhaust system should consider the possibility of explosive concentrations of wood and resin dust within the system. See "SPECIAL" section below. Use of tool mounted exhaust systems should also be considered, especially when working in enclosed areas.

8. Exposure Control Measures/Personal Protection (cont'd.)

MECHANICAL (GENERAL) – Provide general ventilation in processing and storage areas so that exposure limits are met.
SPECIAL – Ensure that exhaust ventilation and material transport systems involved in handling these products contains explosion relief vents or suppression systems designed and operated in accordance with applicable standards if the operating conditions justify their use.
OTHER ENGINEERING CONTROLS – Cutting and machining of product should preferably be done outdoors or with adequate ventilation & containment.

Personal Protective Equipment:
RESPIRATORY PROTECTION – Use filtering face piece respirator ("dust mask") tested and approved under appropriate government standards such as NIOSH (US),CSA (Canada), CEN (EU), or JIS (Japan) where ventilation is not possible and exposure limits may be exceeded or for additional worker comfort or symptom relief. Use respiratory protection in accordance with jurisdictional regulatory requirements similar to the OSHA respiratory protection standard 29CFR 1910.134 following a determination of risk from potential exposures.
EYE PROTECTION – Approved goggles or tight-fitting safety glasses are recommended when excessive exposures to dust may occur (e.g. during clean up) and when eye irritation may occur.
PROTECTIVE GLOVES – Cloth, canvas, or leather gloves are recommended to prevent direct contact and to minimize potential slivers or mechanical irritation from handling product.
OTHER PROTECTIVE CLOTHING OR EQUIPMENT – Outer garments which cover the arms may be desirable in extremely dusty areas.
WORK/HYGIENE PRACTICES – Follow good hygienic and housekeeping practices. Clean up areas where wood and resin dust settles to avoid excessive accumulation of this combustible material. Minimize compressed air blowdown or other practices that generate high airborne-dust concentrations.

9. Physical/Chemical Properties

Appearance: Laminated product with a slightly aromatic resinous and natural wood color. The wood component of these products may consist of aspen, Douglas fir, western hemlock, southern yellow pine or yellow poplar. The Watershed Stability Overlay (WSO) product has a clear thin resin paper layer adhered to the surface.

Odor/Odor Threshold(s):	NAV
pH:	NAP
Melting/Freezing Point:	NAP
Boiling Point (@ 760 mm Hg) and Range:	NAP
Flash Point:	NAP
Evaporation Rate:	0
Flammability:	NAP
Lower/Upper Explosive Limits:	40,000 mg of dust per cubic meter of air is often used as the LEL for wood dusts.
Vapor Pressure (mm Hg):	NAP
Vapor Density (air = 1; 1 atm):	NAP
Relative Density:	NAP
Solubility:	<0.1
Partition Coefficient (n-octanol/water):	NAP
Autoignition Temperature:	Variable [typically 400°-500°F (204°-260°C)]
Decomposition Temperature:	NAV
Viscosity:	NAP
Other Properties:	NAP

10. Stability and Reactivity

Reactivity: NAP
Hazardous Polymerization: ☐ May occur ☒ will not occur
Stability: ☐ Unstable ☒ Stable
Conditions to Avoid: Avoid open flame. Products may ignite at temperatures in excess of 400°F (204°C).
Incompatibility (Materials to Avoid): Avoid contact with oxidizing agents and drying oils.
Hazardous Decomposition or By-Products: Natural decomposition of organic materials such as wood may produce toxic gases and an oxygen deficient atmosphere in enclosed or poorly ventilated areas. Spontaneous and rapid hazardous decomposition will not occur.
Sensitivity to Static Discharge: Airborne wood and resin dust may be ignited by a static discharge depending on airborne concentrations, particle size and moister content.

11. Toxicological Information

Likely Route(s) of Exposure:
- ☐ Ingestion:
- ☒ Skin: Dust
- ☒ Inhalation: Dust
- ☒ Eye: Dust

Signs and Symptoms of Exposure:
Wood Dust - NTP– According to its Report on Carcinogens, Fourteenth Edition, NTP states, "Wood dust is known to be a human carcinogen based on sufficient evidence of carcinogenicity from studies in humans". An association between wood dust exposure and cancer of the nasal cavity has been observed in case reports, cohort studies, and case-control studies that specifically addressed nasal cancer. Associations with cancer of the nasal cavities and paranasal sinuses were observed both in studies of people whose occupations are associated with wood dust exposure and in studies that directly estimated wood dust exposure. This classification is based primarily on increased risk in the occurrence of adenocarcinomas of the nasal cavities and paranasal sinuses associated with exposure to wood dust. The evaluation did not find sufficient evidence to associate cancers of the oropharynx, hypopharynx, lung, lymphatic and hematopoietic systems, stomach, colon or rectum with exposure to wood dust. There is inadequate evidence for the carcinogenicity of wood dust from studies in experimental animals according to NTP.
Wood Dust: 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 to 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.
Formaldehyde – NTP: According to its Report on Carcinogens, Fourteenth Edition, NTP states, Formaldehyde (gas) is known to be a human carcinogen based on sufficient evidence of carcinogenicity from studies in humans and supporting data on mechanisms of carcinogenesis.
Formaldehyde: IARC - Group 1: Carcinogenic to humans, sufficient evidence of carcinogenicity. A working group of IARC has determined that there is sufficient evidence that formaldehyde causes nasopharyngeal cancer in humans, a rare cancer in developed countries and "strong but not sufficient evidence" for leukemia. However, numerous epidemiological studies have failed to demonstrate a relationship between formaldehyde exposure and nasal cancer or pulmonary diseases such as emphysema or lung cancer.

11. Toxicological Information (cont'd.)

Carcinogenicity Listing(s):

☒	NTP:	Wood dust, Known Human Carcinogen. Formaldehyde, Known to be a Human Carcinogen.
☒	IARC Monographs:	Wood dust, Group 1 - Carcinogenic to Humans. Formaldehyde, Group 1- Carcinogenic to Humans.
☒	OSHA Regulated:	Formaldehyde Gas 29CFR 1910.1048

Toxicity Data: No specific information available for products in purchased form. Individual component information is listed below.

Components:

Wood dust (softwood or hardwood)

Dusts generated from sawing, sanding or machining these products may cause respiratory irritation, nasal dryness and irritation, coughing and sinusitis. NTP and IARC (Group 1) classify wood dust as a human carcinogen. See Section 2 above.

Formaldehyde

Human inhalation TC_{Lo} of 17 mg/m^3 for 30 minutes produced eye and pulmonary results; human inhalation TC_{Lo} of 300 ug/m^3 produced nose and central nervous system results; LC_{50} (rat, inhalation) = 1,000 mg/m^3, 30 minutes; LC_{50} (mice, inhalation) = 400 mg/m^3, 2 hours. NTP and IARC (Group 1) classify formaldehyde as a human carcinogen. See Section 2 above.

Target Organs: Eyes, skin and respiratory system.

Note: Weyerhaeuser evaluated the studies referenced in the ACGIH® TLV® Documentation for Wood Dust and others which included potential allergenic references for wood species which may cause skin or respiratory sensitization. There are a limited number of studies of highly variable consistency which reference sensitization from some species of wood. When the total weight of evidence is considered these products are considered to be an eye, skin and repository irritant and not a respiratory or skin sensitizer according to health hazard classification criteria.

12. Ecological Information

Ecotoxicity: NAV for finished products.

Formaldehyde component:

96 hr LC_{50} Fathead Minnow	24 mg/L
96 hr LC_{50} Bluegill	0.10 mg/L
5 min EC_{50} Photobacterium phosphoreum	9 mg/L
96 hr EC_{50} Water flea	20 mg/L

Biopersistance and Degradability: The wood, wax and paper portions of these products are expected to be biodegradable.

Formaldehyde

Trace amounts of free formaldehyde may be released to the atmosphere and would be expected to be removed in the atmosphere by direct photolysis and oxidation by photochemically produced hydroxyl radicals (half-life of a few hours). In the aqueous phase formaldehyde biodegradation is expected to take place in a few days.

Bioaccumulation: NAV

Soil Mobility: NAV

Other adverse effects: NAP

13. Disposal Considerations

Waste Disposal Method: Dry land disposal or incineration is acceptable in most areas. It is, however, the user's responsibility to determine at the time of disposal whether your waste meets any jurisdictional criteria. Note that wood and resin dust may pose a combustible dust hazard.

14. Transport Information

Mode: (air, land, water) 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. Not regulated as a hazardous material by IMDG or IATA regulations concerning the transport of hazardous materials.

UN Proper Shipping Name:	NAP
UN/NA ID Number:	NAP
Hazard Class:	NAP
Packing Group:	NAP
Environmental Hazards (Marine Pollutant):	NAP
Special Precautions:	NAP

15. Regulatory Information

TSCA: Phenol-formaldehyde resin and paraffin wax are on the TSCA inventory.
CERCLA: Formaldehyde (100 lbs. RQ) is on the CERCLA chemical substance inventory.
DSL: Formaldehyde and paraffin wax are on the DSL.
OSHA: Wood products are not hazardous under the criteria of the federal OSHA Hazard Communication Standard 29 CFR 1910.1200. However, wood and resin dust generated by sawing, sanding or machining these products are considered hazardous. Workplace exposure to formaldehyde is specifically regulated under 29 CFR 1910.1048.

STATE RIGHT-TO-KNOW:
California Proposition 65 –

⚠ **WARNING**: This product can expose you to chemicals including wood dust which are known to the State of California to cause cancer, and methanol, which are known to the State of California to cause birth defects or other reproductive harm. Drilling, sawing, sanding or machining wood products can expose you to wood dust. Avoid inhaling wood dust or use a dust mask or other safeguards for personal protection. For more information go to www.P65Warnings.ca.gov and www.P65Warnings.ca.gov/wood . These products contain formaldehyde, which depending on temperature and humidity, may be emitted from the products. Formaldehyde is known to the State of California to cause cancer.

Pennsylvania – These products contain formaldehyde resin which, depending on temperature and humidity, may be emitted from the products. Formaldehyde, phenol, and methanol appear on Pennsylvania's Appendix A, Hazardous Substance Lists.

New Jersey – These products contains formaldehyde, methanol and phenol substances which appear on New Jersey's Environmental Hazardous Substance List.

15. Regulatory Information (cont'd.)

SARA 313 Information: To the best of our knowledge, these products contain formaldehyde at de minimis concentrations (<0.1%) and is not subjected to the SARA Title III Section 313 supplier notification requirements.

SARA 311/312 Hazard Category: These products have been reviewed according 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 corrosive hazard	No
A fire hazard	No
A reactivity hazard	No
A sudden release hazard	No

WHMIS Classification: Wood and products made from wood are exempt from WHMIS per the Hazardous Products Act (HPA). However, wood dust released during the use or modifications of wood products may be hazardous. See Section 2 for health and combustible dust hazard information.

16. Other Information

Date Prepared: 06/10/2015
Date Revised: 08/27/2018
Prepared By: Weyerhaeuser Company Health and Safety.
Weyerhaeuser SDS available on:
http://www.wy.com/sustainability/environment/product-stewardship/safety-data-sheets/

User's Responsibility: The information contained in this 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 the product is suitable for its proposed application(s) and to follow necessary safety precautions. The user has the responsibility to ensure that the most current SDS is used.

Definition of Common Terms:

ACGIH®	=	American Conference of Governmental Industrial Hygienists
C	=	Ceiling Limit
CAS#	=	Chemical Abstracts System Number
DOT	=	U. S. Department of Transportation
DSL	=	Domestic Substance List
EC#	=	Identifying Number Assigned to Chemicals Contained in the European Inventory of Existing Chemical Substances (EINECS)
EC_{50}	=	Effective Concentration That Inhibits the Endpoint to 50% of Control Population
EPA	=	U.S. Environmental Protection Agency
GHS	=	Globally Harmonized System of Classification and Labelling of Chemicals
HMIS	=	(Canada)Hazardous Materials Identification System
HNOC	=	Hazards Not Otherwise Classified
IARC	=	International Agency for Research on Cancer
IATA	=	International Air Transport Association
IMDG	=	International Maritime Dangerous Goods
LC_{50}	=	Concentration in Air Resulting in Death To 50% of Experimental Animals
LCLo	=	Lowest Concentration in Air Resulting in Death
LD_{50}	=	Administered Dose Resulting in Death to 50% of Experimental Animals
LDLo	=	Lowest Dose Resulting in Death
LEL	=	Lower Explosive Limit

16. Other Information (cont'd.)

LFL	=	Lower Flammable Limit
MSHA	=	Mine Safety and Health Administration
NAP	=	Not Applicable
NAV	=	Not Available
NIOSH	=	National Institute for Occupational Safety and Health
NFPA	=	National Fire Protection Association
NPRI	=	(Canada) National Pollution Release Inventory
NTP	=	National Toxicology Program
OSHA	=	Occupational Safety and Health Administration
PEL	=	Permissible Exposure Limit
PNOR	=	Particulate Not Otherwise Regulated
PNOS	=	Particulate Not Otherwise Specified
RCRA	=	Resource Conservation and Recovery Act
STEL	=	Short-Term Exposure Limit (15 minutes)
STP	=	Standard Temperature and Pressure
TCLo	=	Lowest Concentration in Air Resulting in a Toxic Effect
TDG	=	(Canada)Transportation of Dangerous Goods
TDLo	=	Lowest Dose Resulting In a Toxic Effect
TLV	=	Threshold Limit Value
TSCA	=	Toxic Substance Control Act
TWA	=	Time-Weighted Average (8 hours)
UFL	=	Upper Flammable Limit
WHMIS	=	(Canada)Workplace Hazardous Materials Information System

Microllam®Laminated Veneer Lumber (LVL) and Microllam®Laminated Veneer Lumber (LVL) with Watershed™ Stability Overlay (WSO)

Danger

Wood dust may cause nasopharyngeal cancer and/or cancer of the nasal cavities and paranasal sinuses by inhalation. May cause respiratory, skin and eye irritation.

May form combustible dust concentrations in air if small particles are formed during processing or handling

Precautions: Do not handle until all safety precautions have been read and understood. Use outdoors or in a well-ventilated area. Avoid breathing dust and wear appropriate protective equipment for respiratory, skin or eye exposures. Prevent dust release and accumulations to minimize hazards. Take off contaminated clothing and wash before reuse. Keep dust away from ignition sources such as heat, sparks, and flame.

First Aid:

If in eyes, rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Contact a qualified medical professional if symptoms persist.

If on skin, wash with soap and water. If skin irritation or rash occurs, get medical advice/attention.

Inhalation, if experiencing respiratory symptoms, remove to fresh air. Contact a qualified medical professional for serious or persistent respiratory symptoms.

Weyerhaeuser

220 Occidental Ave S.

Seattle, WA 98104

1-800-525-5440

Weyerhaeuser

Label for Microllam® LVL and Microllam® LVL with WSO™ products. See SDS 8/2018 for additional information.

Safety Data Sheet (SDS)

Weyerhaeuser

Parallam® PSL

1. Identification

TRADE NAME(S):	Parallam® PSL
SYNONYMS and/or GRADES:	Parallam® PSL Beams, Parallam® PSL Columns
PRODUCT USES:	Building Materials
CHEMICAL NAME/CLASS:	Wood Products
MANUFACTURER'S NAME:	Weyerhaeuser
ADDRESS:	USA - 220 Occidental Ave S., Seattle, WA 98104 CANADA - 1272 Derwent Way, Delta, BC V3M 5R1
EMERGENCY PHONE:	(844) 523-4081 (3E Company)
BUSINESS PHONE:	USA - (206) 539-3910 CANADA – (604) 526-4665
INTERNET ACCESS:	See Section 16
REVISED DATE:	March 12, 2022

Note: This SDS and attached label refer to Parallam PSL manufactured with or without surface treatment (see Section 9).

2. Hazard(s) Identification

Signal Word: DANGER

NOTE: This product is not hazardous in the form in which it is shipped by the manufacturer but may become hazardous as the result of downstream activities (e.g., cutting, sanding) which creates small particles resulting in the potential hazards as described below.

Classification	Hazard Statement(s)	Pictogram(s)
HEALTH Carcinogen- Category 1A (H350) *	Wood dust may cause nasopharyngeal cancer and/or cancer of the nasal cavities and paranasal sinuses by inhalation	

2. Hazard(s) Identification (cont'd.)

Skin Irritation Category 2 (H315) Specific Target Organ Toxicity - Single Exposure (STOT) Category 3 (H335)	Causes skin irritation May cause respiratory irritation	
Eye Irritation Category 2B (H320)	Causes eye irritation	None
Combustible Dust (US-OSHA Defined Hazard; Canada WHMIS Physical Hazard Class)	If converted to finely divided solid particles during further processing, handling, or by other means, may form combustible dust concentrations in air and catch fire or explode if ignited	None

*Hazard codes (GHS)

HMIS Rating (Scale 0-4):	**Health =**	2*	**Fire =**	1	**Physical Hazard =**	0
NFPA Rating (Scale 0-4):	**Health =**	1	**Fire =**	1	**Reactivity =**	0

Precautionary Statement(s):

Prevention Statements:

P202: Do not handle until all safety precautions have been read and understood.
P210: Keep away from sparks, flame, or other heat sources.
P243: Take precautionary measures against static discharge.
P261+284: Avoid breathing dust. In case of inadequate ventilation wear an approved respirator suitable for conditions of use.
P271: Use outdoors or in a well-ventilated area.
P280: Wear appropriate protective equipment for eye and skin exposure.

Response Statements:

P304+P340+P313: If inhaled and breathing becomes difficult, remove person to fresh air and keep comfortable for breathing. If symptoms persist, call a doctor or other qualified medical professional.
P333+P313: If skin irritation or rash occurs get medical advice/attention.
P352+P264: If on skin wash with soap and water.
P362+P364: Take off contaminated clothing and wash before reuse.
P305+P351+P338: If in eyes, rinse cautiously for several minutes. Remove contact lenses if present and easy to do so.

Disposal:

P501: Dispose of in accordance with federal, state, and local regulations.

Ingredients of Unknown Acute Toxicity (>1%): NAP

3. Composition/Information on Ingredients

Ingredient(s)	CAS#	Wt.%
Wood (wood dust, softwood, or hardwood)	None	87-92
Resin Solids: polymeric phenol-formaldehyde[1] (reacted)	9003-35-4 for polymeric phenol-formaldehyde	4-6
Paraffin or emulsified wax[2]	8002-74-2	0.5-1
Surface treatment[3]	NA (aqueous mixtures)	<0.1

Common Names: [1]Phenol-formaldehyde (PF) resin; [2]Hydrocarbon waxes; [3]Depending on market and manufacturing location, different surface treatment may be applied in dilute form at low application rates; the chemicals in these treatments do not impact the product classification and are well below their respective wt.% cut-off values (also see Section 9)

4. First Aid Measures

Inhalation: Remove to fresh air if respiratory symptoms are experienced. Seek medical help if persistent irritation, severe coughing, breathing difficulty or other serious symptoms occur.

Eye Contact: Treat dust in eye as a foreign object. Flush with water to remove dust particles. Remove contact lenses if present and easy to do so. Avoid touching or rubbing eyes to avoid further irritation or injury. Seek medical help if irritation persists.

Skin Contact: Wood dust may elicit contact dermatitis. Seek medical help if rash, irritation, or dermatitis persists.

Skin Absorption: Not known to absorb through the skin.

Ingestion: Not applicable under normal use.

Symptoms or Effects:

Acute Symptoms/Effects – Dust may cause mechanical irritation of the eyes and respiratory system. Dust can cause physical obstructions in the nasal passages, resulting in dryness of nose, dry cough, and sneezing.

Delayed Symptoms/Effects – Unique delayed effects are not anticipated after exposure. See Section 11 for additional information on chronic effects.

5. Fire-fighting Measures

Extinguishing Media and Restrictions: Water, carbon dioxide and sand.

Specific Hazards, Anticipated Combustion Products: Thermal decomposition (i.e., smoldering, burning) products include carbon monoxide, carbon dioxide, oxides of nitrogen, hydrogen cyanide, aliphatic aldehydes, including formaldehyde, resin acids, terpenes, and polycyclic aromatic hydrocarbons.

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

Special Firefighting Equipment/Procedures: No special equipment anticipated. Beware of potential combustible dust explosion hazard.

Unusual Fire and Explosion Hazards: Depending on moisture content, particle diameter and concentration, wood and resin dust may pose a flash fire or deflagration hazard. If suspended in air in an enclosure or container and ignited, an explosion may occur due to the development of internal pressure causing rupture. An airborne concentration of 40 grams (40,000 mg) of dust per cubic meter of air is often used as the Minimum Explosible Concentration (MEC) for wood dusts. Conduct regular housekeeping inspections and cleaning to prevent excessive dust accumulations. Design and maintain control equipment to minimize fugitive combustible dust emissions. Ensure that ventilation systems are operating properly to capture, transport and contain combustible dust while controlling ignition sources. Reference NFPA 652 "Standard on the Fundamentals of Combustible Dust".

6. Accidental Release Measures

Steps to be taken in case Material Is Released or Spilled: Sweep or vacuum up for recovery and disposal. Avoid creating dusty conditions whenever feasible. Maintain good housekeeping to avoid accumulation of wood and resin dust on exposed surfaces. Use approved filtering face piece respirator ("dust mask") or higher levels of respiratory protection as indicated and goggles where ventilation is not possible and exposure limits may be exceeded or for additional worker comfort.

7. Handling and Storage

Precautions to be taken in Handling and Storage: Product dust may pose a combustible dust hazard. Keep away from ignition sources. Avoid eye contact. Avoid prolonged or repeated contact with skin. Avoid prolonged or repeated breathing of wood dust. Store in well-ventilated, cool, dry place away from open flame.

8. Exposure Control Measures/Personal Protection

Exposure Limits/Guidelines:

Ingredient(s)	Agency	Exposure Limit(s)	Comments
Wood (wood dust, softwood, or hardwood)	OSHA	PEL-TWA 15 mg/m^3 (see footnote [A] below)	Total Dust (PNOR)
	OSHA	PEL-TWA 5 mg/m^3 (see footnote [A] below)	Respirable dust fraction (PNOR)
	ACGIH	TLV-TWA 1 mg/m^3	Inhalable fraction
Phenol-formaldehyde resin solids [B]	OSHA OSHA	PEL-TWA 0.75 ppm PEL-STEL 2 ppm	Free gaseous formaldehyde
	ACGIH ACGIH	TLV-TWA 0.1 ppm TLV-STEL 0.3 ppm	
Paraffin wax	OSHA ACGIH	PEL-TWA 2 mg/m^3 TLV-TWA 2 mg/m^3	Paraffin wax fume Paraffin wax fume

[A] In AFL-CIO v OSHA, 965 F. 2d 962 (11th Cir. 1992), the Court overturned OSHA's 1989 Air Contaminants Rule, including the specific PEL's for wood dust that OSHA had established at that time. The 1989 vacated PEL's were: 5 mg/m^3 PEL-TWA and 10 mg/m^3 STEL (15 min), all softwood and hardwood except Western Red Cedar. Wood dust is now regulated by OSHA as "Particulates Not Otherwise Regulated" (PNOR), which is also referred to as "nuisance dust." However, some states have regulated wood dust PEL's in their state plans. Additionally, OSHA indicated that it may cite employers under the OSH Act general duty clause in appropriate circumstances.

[B] This product may contain free formaldehyde (<0.1%, wt. %), which may be released depending on concentration and environmental conditions. These products contain no added urea-formaldehyde resins.

Ventilation:

LOCAL EXHAUST – Provide local exhaust as needed so that exposure limits are met. Ventilation to control dust should be considered where potential explosive concentrations and ignition sources are present. The design and operation of any exhaust system should consider the possibility of explosive concentrations of wood and resin dust within the system. See "SPECIAL" section below. Use of tool mounted exhaust systems should also be considered, especially when working in enclosed areas.

8. Exposure Control Measures/Personal Protection (cont'd.)

MECHANICAL (GENERAL) – Provide general ventilation in processing and storage areas so that exposure limits are met.
SPECIAL – Ensure that exhaust ventilation and material transport systems involved in handling this product contain explosion relief vents or suppression systems designed and operated in accordance with applicable standards if the operating conditions justify their use.
OTHER ENGINEERING CONTROLS – Cutting and machining of product should preferably be done outdoors or with adequate ventilation and containment.

Personal Protective Equipment:
RESPIRATORY PROTECTION – Use filtering face piece respirator ("dust mask") evaluated and approved under appropriate government standards such as NIOSH (US), CSA (Canada), CEN (EU), or JIS (Japan) where exposure limits may be exceeded or for additional worker comfort or symptom relief. Use respiratory protection in accordance with jurisdictional regulatory requirements like the OSHA respiratory protection standard 29CFR 1910.134 following a determination of risk from potential exposures.
EYE PROTECTION – Approved goggles or tight-fitting safety glasses are recommended when excessive exposures to dust may occur (e.g., during clean up) and when eye irritation may occur.
PROTECTIVE GLOVES – Cloth, canvas, or leather gloves are recommended to prevent direct contact and to minimize potential slivers or mechanical irritation from handling product.
OTHER PROTECTIVE CLOTHING OR EQUIPMENT – Outer garments which cover the arms may be desirable in extremely dusty areas.
WORK/HYGIENE PRACTICES – Follow good hygienic and housekeeping practices. Clean up areas where wood and resin dust settle to avoid excessive accumulation of this combustible material. Minimize compressed air blowdown or other practices that generate high airborne-dust concentrations.

9. Physical/Chemical Properties

Appearance: Parallam® PSL consists of a variety of wood species with a woody odor. Eastern manufactured product is made primarily from poplar and pine. The Parallam PSL manufactured with surface treatment is a deep golden color on the four exposed major surfaces (excludes piece ends). The Parallam PSL product made with one resin is a light wooden tan color on the exposed major surfaces. The Parallam PSL manufactured primarily for the eastern North American market contains a surface treatment; this product has a stamped product code on one of the narrow edges which includes the designation PFS 0579 at the end of each stamp. Some product manufactured primarily for the western North American market is made using Douglas fir has a different surface treatment on the four exposed major surfaces and is stamped with product code PFS 0575.

Odor/Odor Threshold(s):	NAV
pH:	NAP
Melting/Freezing Point:	NAP
Boiling Point (@ 760 mm Hg) and Range:	NAP
Flash Point:	NAP
Evaporation Rate:	NAP
Flammability:	NAV
Lower/Upper Explosive Limits:	40,000 mg of dust per cubic meter of air is used as the LEL for wood dusts.
Vapor Pressure (mm Hg):	NAP
Vapor Density (air = 1; 1 atm):	NAP
Relative Density:	NAP

9. Physical/Chemical Properties (cont'd.)

Solubility:	<0.1
Partition Coefficient (n- octanol /water):	NAP
Autoignition Temperature:	Variable [typically 400°-500°F (204°-260°C)]
Decomposition Temperature:	NAV
Viscosity:	NAP
Other Properties:	NAP

10. Stability and Reactivity

Reactivity: NAP

Hazardous Polymerization: ☐ May occur ☒ Will not occur

Stability: ☐ Unstable ☒ 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 and drying oils.

Hazardous Decomposition or By-Products: Natural decomposition of organic materials such as wood may produce toxic gases and an oxygen deficient atmosphere in enclosed or poorly ventilated areas. Spontaneous and rapid hazardous decomposition will not occur.

Sensitivity to Static Discharge: Airborne wood and resin dust may ignite by a static discharge depending on airborne concentrations, particle size and moisture content.

11. Toxicological Information

Route(s) of Exposure:

- ☐ Ingestion:
- ☒ Skin: Dust
- ☒ Inhalation: Dust
- ☒ Eye: Dust

Signs and Symptoms of Exposure:

Wood Dust - NTP: According to its Report on Carcinogens, Fourteenth Edition, NTP states, "Wood dust is known to be a human carcinogen based on sufficient evidence of carcinogenicity from studies in humans." An association between wood dust exposure and cancer of the nasal cavity has been observed in case reports, cohort studies, and case-control studies that specifically addressed nasal cancer. Associations with cancer of the nasal cavities and paranasal sinuses were observed both in studies of people whose occupations are associated with wood dust exposure and in studies that directly estimated wood dust exposure. This classification is based primarily on increased risk in the occurrence of adenocarcinomas of the nasal cavities and paranasal sinuses associated with exposure to wood dust. The evaluation did not find sufficient evidence to associate cancers of the oropharynx, hypopharynx, lung, lymphatic and hematopoietic systems, stomach, colon, or rectum with exposure to wood dust. There is inadequate evidence for the carcinogenicity of wood dust from studies in experimental animals according to NTP.

Wood Dust: 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 to 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.

Formaldehyde - NTP: According to its Report on Carcinogens, Fourteenth Edition, NTP states, Formaldehyde (gas) is known to be a human carcinogen based on sufficient evidence of carcinogenicity from studies in humans and supporting data on mechanisms of carcinogenesis.

11. Toxicological Information (cont'd.)

Formaldehyde: IARC - Group 1: Carcinogenic to humans, sufficient evidence of carcinogenicity. A working group of IARC has determined that there is sufficient evidence that formaldehyde causes nasopharyngeal cancer in humans, a rare cancer in developed countries and "strong but not sufficient evidence" for leukemia. However, numerous epidemiological studies have failed to demonstrate a relationship between formaldehyde exposure and nasal cancer or pulmonary diseases such as emphysema or lung cancer.

Carcinogenicity Listing(s) (checked if applicable)**:**

☒	NTP:	Wood dust, Known Human Carcinogen. Formaldehyde, known to be a Human Carcinogen.
☒	IARC Monographs:	Wood dust, Group 1 - carcinogenic to humans. Formaldehyde, Group 1- carcinogenic to humans.
☒	OSHA Regulated:	Formaldehyde Gas 29CFR 1910.1048

Toxicity Data: No specific information available for product in purchased form. Individual component information is listed below.

Components:

Wood dust (softwood or hardwood)

Dusts generated from sawing, sanding, or machining the product may cause respiratory irritation, nasal dryness, and irritation, coughing and sinusitis. NTP and IARC (Group 1) classify wood dust as a human carcinogen. See Section 2 above.

Formaldehyde

Human inhalation TC_{Lo} of 17 mg/m^3 for 30 minutes produced eye and pulmonary results; human inhalation TC_{Lo} of 300 ug/m^3 produced nose and central nervous system results; LC_{50} (rat, inhalation) = 1,000 mg/m^3, 30 minutes; LC_{50} (mice, inhalation) = 400 mg/m^3, 2 hours. NTP and IARC (Group 1) classify formaldehyde as a human carcinogen. See Section 2 above.

Target Organs: Eyes, skin, and respiratory system.

Note: Weyerhaeuser evaluated the studies referenced in the ACGIH® TLV® Documentation for Wood Dust and others which included potential allergenic references for wood species which may cause skin or respiratory sensitization. There are a limited number of studies of highly variable consistency which reference sensitization from some species of wood. When the total weight of evidence is considered, this product is an eye, skin, and respiratory irritant and not a respiratory or skin sensitizer according to health hazard classification criteria.

12. Ecological Information

Ecotoxicity: NAV for finished product.

Component: Formaldehyde

96 hr LC_{50} Fathead Minnow	24 mg/L
96 hr LC_{50} Bluegill	0.10 mg/L
5 min EC_{50} Photobacterium phosphoreum	9 mg/L
96 hr EC_{50} Water flea	20 mg/L

Biopersistance and Degradability: The wood portion of this product would be expected to be biodegradable.

Formaldehyde

Trace amounts of free formaldehyde may be released to the atmosphere and would be expected to be removed in the atmosphere by direct photolysis and oxidation by photochemically produced hydroxyl radicals (half-life of a few hours). In the aqueous phase formaldehyde biodegradation is expected to take place in a few days.

Bioaccumulation: Not expected to bioaccumulate.

Soil Mobility: NAV

Other Adverse Effects: NAP

13. Disposal Considerations

Waste Disposal Method: Dry land disposal or incineration is acceptable in most areas. It is, however, the user's responsibility to determine at the time of disposal whether your waste meets any jurisdictional criteria. Note that wood and resin dust may pose a combustible dust hazard.

14. Transport Information

Mode: (air, land, water) 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. Not regulated as a hazardous material by IMDG or IATA regulations concerning the transport of hazardous materials.

UN Proper Shipping Name:	NAP
UN/NA ID Number:	NAP
Hazard Class:	NAP
Packing Group:	NAP
Environmental Hazards (Marine Pollutant):	NAP
Special Precautions	NAP

15. Regulatory Information

TSCA: All ingredients are on the TSCA chemical substance inventory.
CERCLA: Formaldehyde (100 lbs. RQ) is on the CERCLA chemical substance inventory.
DSL: All ingredients are on the Canadian Domestic Substance List.
OSHA: Wood products are not hazardous under the criteria of the federal OSHA Hazard Communication Standard 29 CFR 1910.1200. However, wood and resin dust generated by sawing, sanding, or machining this product is considered hazardous. Workplace exposure to formaldehyde is regulated under 29 CFR 1910.1048.

STATE RIGHT-TO-KNOW:
California Proposition 65 –

⚠ **WARNING**: This product can expose you to chemicals including wood dust which is known to the State of California to cause cancer, and methanol, which is known to the State of California to cause birth defects or other reproductive harm. Drilling, sawing, sanding, or machining wood products can expose you to wood dust. Avoid inhaling wood dust or use a dust mask or other safeguards for personal protection. For more information go to www.P65Warnings.ca.gov and www.P65Warnings.ca.gov/wood. These products contain formaldehyde, which depending on temperature and humidity may be emitted from the product. Formaldehyde is known to the State of California to cause cancer.

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. Formaldehyde, paraffin wax, methanol and wood dust appear on Pennsylvania's Appendix A, Hazardous Substance List.

New Jersey – 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. Formaldehyde, methanol, and wood dust appear on New Jersey's Environmental Hazardous Substance List.

15. Regulatory Information (cont'd.)

SARA 313 Information: To the best of our knowledge, this product contains formaldehyde at de minimis concentrations (<0.1%) and is not subject to the 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 corrosive hazard	No
A fire hazard	No
A reactivity hazard	No
A sudden release hazard	No

FDA: Not intended for use as a food additive or indirect food contact item.

WHMIS Classification: Wood and products made from wood are exempt from WHMIS per the Hazardous Products Act (HPA). However, wood dust released during the use or modifications of manufactured wood products may be hazardous. See Section 2 for health and combustible dust hazard information.

16. Other Information

Date Prepared: 04/20/2015
Date Revised: 03/12/2022
Prepared By: Weyerhaeuser Company Health and Safety.
Weyerhaeuser SDS available on:
https://www.weyerhaeuser.com/woodproducts/building-green-with-wood/product-stewardship-safety-data-sheets/

User's Responsibility: The information contained in this 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 the product is suitable for its proposed application(s) and to follow necessary safety precautions. The user has the responsibility to ensure that the most current SDS is used.

Definition of Terms:

ACGIH®	=	American Conference of Governmental Industrial Hygienists
C	=	Ceiling Limit
CAS#	=	Chemical Abstracts System Number
DOT	=	U. S. Department of Transportation
DSL	=	Domestic Substance List
EC#	=	Identifying Number Assigned to Chemicals Contained in the European Inventory of Existing Chemical Substances (EINECS)
EC_{50}	=	Effective Concentration That Inhibits the Endpoint to 50% of Control Population
EPA	=	U.S. Environmental Protection Agency
GHS	=	Globally Harmonized System of Classification and Labelling of Chemicals
HMIS	=	(Canada) Hazardous Materials Identification System
IARC	=	International Agency for Research on Cancer
IATA	=	International Air Transport Association
IMDG	=	International Maritime Dangerous Goods
LC_{50}	=	Concentration in Air Resulting in Death To 50% of Experimental Animals
LCLo	=	Lowest Concentration in Air Resulting in Death
LD_{50}	=	Administered Dose Resulting in Death to 50% of Experimental Animals
LDLo	=	Lowest Dose Resulting in Death

16. Other Information (cont'd.)

LEL	=	Lower Explosive Limit
LFL	=	Lower Flammable Limit
MSHA	=	Mine Safety and Health Administration
NAP	=	Not Applicable
NAV	=	Not Available
NIOSH	=	National Institute for Occupational Safety and Health
NFPA	=	National Fire Protection Association
NPRI	=	Canada-National Pollution Release Inventory
NTP	=	National Toxicology Program
OSHA	=	Occupational Safety and Health Administration
PEL	=	Permissible Exposure Limit
PNOR	=	Particulate Not Otherwise Regulated
PNOS	=	Particulate Not Otherwise Specified
RCRA	=	Resource Conservation and Recovery Act
STEL	=	Short-Term Exposure Limit (15 minutes)
STP	=	Standard Temperature and Pressure
TCLo	=	Lowest Concentration in Air Resulting in a Toxic Effect
TDG	=	(Canada) Transportation of Dangerous Goods
TDLo	=	Lowest Dose Resulting in a Toxic Effect
TLV	=	Threshold Limit Value
TSCA	=	Toxic Substance Control Act
TWA	=	Time-Weighted Average (8 hours)
UFL	=	Upper Flammable Limit
WHMIS	=	(Canada) Workplace Hazardous Materials Information System

Parallam® PSL

Danger

Wood dust may cause nasopharyngeal cancer and/or cancer of the nasal cavities and paranasal sinuses by inhalation. May cause respiratory, skin and eye irritation.

May form combustible dust concentrations in air if finely divided solid particles are formed during processing or handling and catch fire or explode if ignited.

Precautions: Do not handle until all safety precautions have been read and understood. Use outdoors or in a well-ventilated area. Avoid breathing dust and wear appropriate protective equipment for respiratory, skin or eye exposures. Prevent dust release and accumulations to minimize hazards. Take off contaminated clothing and wash before reuse. Keep dust away from ignition sources such as heat, sparks, and flame.

First Aid:

If in eyes, rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Contact a qualified medical professional if symptoms persist.

If on skin, wash with soap and water. If skin irritation or rash occurs, get medical advice/attention.

Inhalation, if experiencing respiratory symptoms, remove to fresh air. Contact a qualified medical professional for serious or persistent respiratory symptoms.

Weyerhaeuser

USA - 220 Occidental Ave S., Seattle, WA 98104

CANADA - 272 Derwent Way, Delta, BC V3M 5R1

1-800-525-5440

Weyerhaeuser

Label for Parallam® PSL products. See SDS 3/2022 for additional information.

PotlatchDeltic

Safety Data Sheet
Plywood

SECTION 1: Identification

1.1 Product identifier

Product name: Plywood

1.2 Other means of identification
Not applicable.

1.3 Recommended use of the chemical and restrictions on use
Recommended use: plywood for general construction.
Restriction on use: no data available.

1.4 Supplier's details

Name: PotlatchDeltic Land and Lumber, LLC
Address: 601 W 1st Ave., Suite 1600
Spokane, WA 99201
USA

Telephone: (509) 835-1500

1.5 Manufacturer's details

Name: St. Maries Complex
Address: 2200 Railroad Ave.
St. Maries, ID 83861
USA

Telephone: (208) 245-2585

1.6 Emergency phone number(s)

(509) 835-1500

SECTION 2: Hazard identification

General hazard statement
The product is non-hazardous as delivered. However, it may become hazardous as a result of dust generating downstream activities (e.g. cutting, grinding, etc.). The potential hazards from exposure to dust and mitigating measures are described below.

2.1 Classification of the substance or mixture

GHS classification in accordance with: (US) OSHA (29 CFR 1910.1200)

- Combustible dusts
- Carcinogenicity, Cat. 1A
- Sensitization, skin, Cat. 1
- Sensitization, respiratory, Cat. 1
- Specific target organ toxicity (single exposure), Cat. 3

- Specific target organ toxicity (repeated exposure), Cat. 1

2.2 GHS label elements, including precautionary statements

Pictogram

Signal word	**Danger**

Hazard statement(s)

H317	May cause an allergic skin reaction
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335	May cause respiratory irritation
H350	May cause cancer [inhalation]
H372	Causes damage to organs [lung/respiratory system] through prolonged or repeated exposure [inhalation]
—	May form combustible dust concentrations in air

Precautionary statement(s)

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P264	Wash hands and exposed skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing must not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P284	In case of inadequate ventilation wear respiratory protection.
P302+P352	IF ON SKIN: Wash with plenty of water
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P314	Get medical advice/attention if you feel unwell.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
P363	Wash contaminated clothing before reuse.
P405	Store locked up.
P501	Dispose of contents/container in accordance with applicable Federal, State and local laws and regulations.

2.3 Other hazards which do not result in classification

Dust may cause skin irritation. Dust may cause eye irritation. Exposure to dust may aggravate pre-existing eye, skin, or respiratory conditions.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable.

3.2 Mixtures

Components

Component	Concentration
Wood (wood dust, softwood or hardwood) (CAS no.: not available) CLASSIFICATIONS: Combustible dusts; Carcinogenicity, Cat. 1A; Sensitization, skin, Cat. 1; Sensitization, respiratory, Cat. 1; Specific target organ toxicity (single exposure), Cat. 3; Specific target organ toxicity (repeated exposure), Cat. 1.	**98-99%**
Cured Phenol-Formaldehyde resin (CAS no.: 9003-35-4) CLASSIFICATIONS: Not classified.	**1-2%**

Impurities: product may contain trace amounts of Formaldehyde (CAS no.: 50-00-0)

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

General advice	Get medical advice/ attention if you feel unwell.
If inhaled	Remove person to fresh air and keep comfortable for breathing. Call a poison center or doctor if you feel unwell.
In case of skin contact	Wash with plenty of water for at least 15 minutes. Call a poison center or doctor if irritation or rash develops or persists. Wash contaminated clothing before reuse.
In case of eye contact	Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention/advice.
If swallowed	Call a poison center or doctor if you feel unwell. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms/effects, acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

If inhaled	Dust may cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
In case of skin contact	Dust may cause skin irritation. May cause an allergic skin reaction. Signs/symptoms may include localized redness, dryness, swelling, itching, rash, and hives.
In case of eye contact	Dust may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.
If swallowed	Ingestion caused by poor hygiene practices may be harmful and cause adverse symptoms, including, diarrhea, nausea, gastrointestinal irritation.
Chronic exposure	Inhalation of dust may cause cancer. Causes damage to organs (lungs) through prolonged or repeated exposure (inhalation).

4.3 Indication of immediate medical attention and special treatment needed, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Specific hazards arising from the chemical
May form combustible dust concentrations in air. Large dust clouds from product have the potential to ignite explosively.
Lower explosive limit (LEL): 40 g/m³.
Hazardous combustion products: Carbon oxides and other toxic fumes and gases.

5.3 Special protective actions for fire-fighters
Wear self-contained breathing apparatus for firefighting if necessary. Fight fire from a safe distance or a protected location. Approach fire from upwind to avoid hazardous vapours or gases.

Further information
No data available

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Avoid generation of dust. Ensure adequate ventilation. Avoid breathing dust. Keep all ignition sources away. Wear suitable personal protective equipment. For personal protection see section 8.

6.2 Environmental precautions
Avoid unnecessary release into the environment.

6.3 Methods and materials for containment and cleaning up
Pick up and arrange disposal without dust generation.

If dust is generated:
Non-sparking tools should be used. Use explosion proof vacuum with HEPA filter during cleanup. Keep all ignition sources away from spill to avoid potential for dust explosion. If sweeping is required use a dust suppressant.

Reference to other sections
For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Handle in accordance with good industrial hygiene and safety practices. Minimize dust generation. Do not breathe dust. Wash hands and exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Wear suitable personal protective equipment. For personal protection see section 8. Avoid accumulation of dusts, which can lead to a serious hazard of dust explosion. Keep all ignition sources away. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres.

7.2 Conditions for safe storage, including any incompatibilities
Store in a cool, well-ventilated and dry place. Keep away from sources of ignition, heat, and direct sunlight.

Specific end use(s)
Apart from the uses mentioned in section 1 no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

Wood dust (CAS no.: not available)

OSHA PEL 8-hour TWA (ST) STEL (C) Ceiling Peak		NIOSH REL Up to 10-hour TWA (ST) STEL (C) Ceiling		ACGIH® TLV® 8-hour TWA (ST) STEL (C) Ceiling		Cal/OSHA PEL 8-hour TWA (ST) STEL (C) Ceiling Peak	
PEL-TWA	15 mg/m³ (total dust), 5 mg/m³ (respirable dust)	**REL-TWA**	1 mg/m³	**TLV-TWA**	Western red cedar: 0.5 mg/m³ (inhalable fraction), All other species: 1 mg/m³ (inhalable fraction)	**PEL-TWA**	All soft and hardwoods, except Western red cedar: 2 mg/m³. Western red cedar: 0.5 mg/m³.
PEL-STEL	Not available	**REL-STEL**	Not available	**TLV-STEL**	Not available	**PEL-STEL**	5 mg/m³ (all soft and hardwoods, except Western red cedar)
PEL-C	Not available	**REL-C**	Not available	**TLV-C**	Not available	**PEL-C**	Not available

Formaldehyde (CAS no.: 50-00-0)

OSHA PEL 8-hour TWA (ST) STEL (C) Ceiling Peak		NIOSH REL Up to 10-hour TWA (ST) STEL (C) Ceiling		ACGIH® TLV® 8-hour TWA (ST) STEL (C) Ceiling		Cal/OSHA PEL 8-hour TWA (ST) STEL (C) Ceiling Peak	
PEL-TWA	0.75 ppm [0.5 ppm Action Level]	**REL-TWA**	0.016 ppm	**TLV-TWA**	0.1 ppm	**PEL-TWA**	0.75 ppm [0.50 ppm Action Level]
PEL-STEL	2 ppm	**REL-STEL**	Not available	**TLV-STEL**	0.3 ppm	**PEL-STEL**	2 ppm
PEL-C	Not available	**REL-C**	0.1 ppm [15 minutes]	**TLV-C**	Not available	**PEL-C**	Not available

8.2 Appropriate engineering controls

Provide general ventilation or local exhaust ventilation to minimize exposure to dust and maintain airborne concentrations below OSHA PELs or other specified exposure limits.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Pictograms

Eye/face protection

Wear tightly fitting safety goggles. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Wear protective gloves. Consult manufacturer specifications for further information.

Body protection

Wear protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

If engineering controls and ventilation are not sufficient to control exposure to below the allowable limits then an appropriate dust mask, air-purifying respirator with particulate filter (HEPA), or self-contained breathing apparatus must be used. Supplied air breathing apparatus must be used when oxygen concentrations are low or if airborne concentrations exceed the limits of the air-purifying respirators. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Thermal hazards
No data available.

Environmental exposure controls
Avoid unnecessary release into the environment.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance/form (physical state, color, etc.)	Solid wood sheet with natural wood color.
Odor	Slight aromatic resinous and wood odor.
Odor threshold	No data available.
pH	Not applicable.
Melting point/freezing point	Not applicable.
Initial boiling point and boiling range	Not applicable.
Flash point	Not applicable.
Evaporation rate	Not applicable.
Flammability (solid, gas)	No data available.
Upper/lower flammability limits	No data available.
Upper explosive limits	No data available.
Lower explosive limit (LEL)	40 g/m³ (wood dust)
Vapor pressure	Not applicable.
Vapor density	Not applicable.
Relative density	No data available.
Solubility(ies)	No data available.
Partition coefficient: n-octanol/water	No data available.
Auto-ignition temperature	482-572° F (250-300°C)
Decomposition temperature	No data available.
Viscosity	Not applicable.

Other safety information
No data available.

SECTION 10: Stability and reactivity

10.1 Reactivity
Non-reactive under normal use conditions.

10.2 Chemical stability
Stable under normal storage conditions.

10.3 Possibility of hazardous reactions
Hazardous polymerization will not occur.

10.4 Conditions to avoid
Avoid dust generation. Keep away from open flames, hot surfaces and sources of ignition. Avoid exposure to incompatible products. Protect from moisture.

10.5 Incompatible materials
Strong oxidizing agents, strong acids, strong bases.

10.6 Hazardous decomposition products
Carbon oxides (CO, CO2), Formaldehyde and other organic compounds.

SECTION 11: Toxicological information

Information on toxicological effects

Likely Routes of Exposure to dust: Eye contact. Skin contact. Inhalation.

If inhaled	Dust may cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
In case of skin contact	Dust may cause skin irritation. May cause an allergic skin reaction. Signs/symptoms may include localized redness, dryness, swelling, itching, rash, and hives.
In case of eye contact	Dust may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.
If swallowed	Ingestion caused by poor hygiene practices may be harmful and cause adverse symptoms, including, diarrhea, nausea, gastrointestinal irritation.
Chronic exposure	Inhalation of dust may cause cancer. Causes damage to organs (lungs) through prolonged or repeated exposure (inhalation).

Acute toxicity
Based on available data, classification data are not met.

Components (US National Library of Medicine ChemIDplus database toxicity data):

Formaldehyde (CAS no.: 50-00-0)
LD50 (oral) - rat – 100 mg/kg
LD50 (skin) - rabbit - 0.27 mL/kg
LD50 (inhalation) - rat – 203 mg/m^3

Skin corrosion/irritation
Dust may cause skin irritation.

Serious eye damage/irritation
Dust may cause eye irritation.

Respiratory or skin sensitization
May cause an allergic skin reaction.

Dust may cause allergy or asthma symptoms or breathing difficulties if inhaled.

Germ cell mutagenicity
Based on available data, classification data are not met.

Carcinogenicity
May cause cancer.

Wood dust may cause cancer of the nasal cavity and paranasal sinuses and of the nasopharynx. Plywood may release extremely low amounts of formaldehyde. Formaldehyde may cause nasopharyngeal cancer, leukaemia, and sinonasal cancer.

IARC:	Wood Dust: Group 1: Carcinogenic to humans; sufficient evidence of carcinogenicity. Formaldehyde: Group 1: Carcinogenic to humans, sufficient evidence of carcinogenicity.
NTP:	Wood Dust: Known to be a human carcinogen. Formaldehyde: Known to be a human carcinogen.
OSHA:	Formaldehyde: Listed as carcinogen

Reproductive toxicity
Based on available data, classification data are not met

STOT-single exposure
Dust may cause respiratory irritation.

STOT-repeated exposure
Dust causes damage to organs (lung/respiratory system) through prolonged or repeated exposure via inhalation.

Aspiration hazard
Based on available data, classification data are not met.

Additional information
No data available.

SECTION 12: Ecological information

Toxicity
No data available.

Persistence and degradability
No data available.

Bioaccumulative potential
No data available.

Mobility in soil
No data available.

Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

SECTION 13: Disposal considerations

Disposal of the product
Disposal should be in accordance with applicable Federal, State and local laws and regulations. Local regulations may be more stringent than State or Federal requirements.

Disposal of contaminated packaging
Dispose of as unused product.

SECTION 14: Transport information

DOT (US)
Not dangerous goods

IMDG
Not dangerous goods

IATA
Not dangerous goods

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

California Prop. 65 Components
Wood dust (CAS no.: not available)
Formaldehyde (CAS no.: 50-00-0)

SARA 311/312 Hazards
Acute Health Hazard, Chronic Health Hazard

SARA 313 Components
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

HMIS Rating

Plywood	
HEALTH	3*
FLAMMABILITY	1
PHYSICAL HAZARD	0
PERSONAL PROTECTION	

NFPA Rating

SECTION 16: Other information

16.1 Further information/disclaimer

Date of issue: September 14, 2021.

DISCLAIMER: The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigation to determine the suitability of information for their particular purposes. All materials may present unknown hazards and should be used with caution. In no event shall we be held liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, whatsoever arising, even if we have been advised of the possibility of such damages.

Safety Data Sheet (SDS)

Weyerhaeuser

TimberStrand® LSL

1. Identification

TRADE NAME(S):	TimberStrand® LSL
SYNONYMS and/or GRADES:	TimberStrand® LSL Beams, TimberStrand® LSL Framing, TimberStrand® LSL Headers, TimberStrand® LSL Rim Board, TimberStrand® LSL Sill Plates, TimberStrand® Wall Framing, TimberStrand® Premium Lumber, Weyerhaeuser Concrete Edge Form, Millwork, IND-38, Shear Brace Component, Weyerhaeuser LSL Edge Form
PRODUCT USES:	Building Materials
CHEMICAL NAME/CLASS:	Wood Products
MANUFACTURER'S NAME:	Weyerhaeuser
ADDRESS:	220 Occidental Ave S., Seattle, WA 98104
EMERGENCY PHONE(DOT):	(844) 523-4081 (3E Company)
BUSINESS PHONE:	(206) 539-3910
INTERNET ACCESS:	See section 16
REVISED DATE:	August 27, 2018

2. Hazard(s) Identification

Signal Word: DANGER

NOTE: This product is not hazardous in the form in which it is shipped by the manufacturer but may become hazardous as the result of downstream activities (e.g. cutting, sanding) which creates small particles resulting in the potential hazards as described below.

Classification	Hazard Statement(s)	Pictogram(s)
HEALTH Carcinogen - Category 1A (H350)*	Wood dust may cause nasopharyngeal cancer and/or cancer of the nasal cavities and paranasal sinuses by inhalation	

2. Hazard(s) Identification (cont'd.)

Skin Irritation Category 2 (H315) Specific Target Organ Toxicity- Single Exposure (STOT) Category 3 (H335)	Causes skin irritation May cause respiratory irritation	
Eye Irritation Category 2B (H320)	Causes eye irritation	None
Combustible Dust (OSHA Defined Hazard)	If converted to small particles during further processing, handling, or by other means, may form combustible dust concentrations in air	None

*Hazard codes (GHS)

HMIS Rating (Scale 0-4):	**Health =**	2*	**Fire =**	1	**Physical Hazard =**	0
NFPA Rating (Scale 0-4):	**Health =**	1	**Fire =**	1	**Reactivity =**	0

Precautionary Statement(s):

Prevention Statements:

P202: Do not handle until all safety precautions have been read and understood.
P210: Keep away from sparks, flame or other heat sources.
P243: Take precautionary measures against static discharge.
P261+284: Avoid breathing dust. In case of inadequate ventilation wear an approved respirator suitable for conditions of use.
P271: Use outdoors or in a well-ventilated area.
P280: Wear appropriate protective equipment for eye and skin exposure.

Response Statements:

P304+P340+P313: If inhaled and breathing becomes difficult, remove person to fresh air and keep comfortable for breathing. If symptoms persist, call a doctor or other qualified medical professional.
P333+P313: If skin irritation or rash occurs get medical advice/attention.
P352+P264: If on skin wash with plenty of soap and water.
P362+P364: Take off contaminated clothing and wash before reuse.
P305+P351+P338: If in eyes, rinse cautiously for several minutes. Remove contact lenses if present and easy to do so.

Disposal:

P501: Dispose of in accordance with federal, state and local regulations.

Ingredients of Unknown Acute Toxicity (>1%): NAP

3. Composition/Information on Ingredients

Ingredient(s)	CAS#	Wt.%
Wood (wood dust, softwood or hardwood)	None	93-96
Resin solids: Polymeric Diphenylmethane Diisocyanate [1] $[C_6H_3(NCO)CH_2]$ n (reacted)	9016-87-9	3-6
Paraffin Wax[2]	8002-74-2	< 1

Common names: [1]Polymeric MDI (pMDI), [2] Hydrocarbon waxes, synthetic wax.

4. First Aid Measures

Inhalation: Remove to fresh air if respiratory symptoms are experienced. Seek medical help if persistent irritation, severe coughing, breathing difficulty or other serious symptoms occur.

Eye Contact: Treat dust in eye as a foreign object. Flush with water to remove dust particles. Remove contact lenses if present and easy to do so. Avoid touching or rubbing eyes to avoid further irritation or injury. Seek medical help if irritation persists.

Skin Contact: Wood dust may elicit contact dermatitis. Seek medical help if rash, irritation or dermatitis persists.

Skin Absorption: Not known to be absorbed through the skin.

Ingestion: Not applicable under normal use.

Symptoms or Effects:

Acute Symptoms/Effects – Dust may cause mechanical irritation of the respiratory system. Dust can cause physical obstructions in the nasal passages, resulting in dryness of nose, dry cough, and sneezing. Dust may cause mechanical irritation of the eyes.

Delayed Symptoms/Effects – Unique delayed effects are not anticipated after exposure. See Section 11 for additional information on chronic effects.

5. Fire-fighting Measures

Extinguishing Media and Restrictions: Water, carbon dioxide and sand.

Specific Hazards, Anticipated Combustion Products: Thermal decomposition (i.e. smoldering, burning) products include carbon monoxide, carbon dioxide, oxides of nitrogen, hydrogen cyanide, aliphatic aldehydes, resin acids, terpenes, and polycyclic aromatic hydrocarbons.

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

Special Firefighting Equipment/Procedures: No special equipment anticipated. Beware of potential combustible dust explosion hazard.

Unusual Fire and Explosion Hazards: Depending on moisture content, particle diameter and concentration, wood and resin dust may pose a flash fire or deflagration hazard. If suspended in air in an enclosure or container and ignited, an explosion may occur due to the development of internal pressure causing rupture. An airborne concentration of 40 grams (40,000 mg) of dust per cubic meter of air is often used as the Minimum Explosible Concentration (MEC) for wood dusts. Conduct regular housekeeping inspections and cleaning to prevent excessive dust accumulations. Design and maintain control equipment to minimize fugitive combustible dust emissions. Ensure that ventilation systems are operating properly to capture, transport and contain combustible dust while controlling ignition sources. Reference NFPA 652 "Standard on the Fundamentals of Combustible Dust".

6. Accidental Release Measures

Steps to be taken in case Material Is Released or Spilled: Sweep or vacuum up for recovery and disposal. Avoid creating dusty conditions whenever feasible. Maintain good housekeeping to avoid accumulation of product dust on exposed surfaces. Use approved filtering face piece respirator ("dust mask") or higher levels of respiratory protection as indicated and goggles where ventilation is not possible and exposure limits may be exceeded or for additional worker comfort.

7. Handling and Storage

Precautions to be taken in Handling and Storage: Product dust may pose a combustible dust hazard. Keep away from ignition sources. Avoid eye contact. Avoid prolonged or repeated contact with skin. Avoid prolonged or repeated breathing of dusts. Store in well-ventilated, cool, dry place away from open flame.

8. Exposure Control Measures/Personal Protection

Exposure Limits/Guidelines:

Ingredient(s)	Agency	Exposure Limit(s)	Comments
Wood (wood dust, softwood and hardwood)	OSHA	PEL-TWA 15 mg/m^3 (see footnote [A] below)	Total dust (PNOR)
	OSHA	PEL-TWA 5 mg/m^3 (see footnote [A] below)	Respirable dust fraction (PNOR)
	ACGIH	TLV-TWA 1 mg/m^3	Inhalable fraction
Paraffin Wax	OSHA	PEL-TWA 2 mg/m^3	Paraffin wax fume
	ACGIH	TLV-TWA 2 mg/m^3	Paraffin wax fume
Polymeric Diphenylmethane Diisocyanate [B]	OSHA	None	
	ACGIH	None	

[A] In AFL-CIO v OSHA, 965 F. 2d 962 (11th Cir. 1992), the Court overturned OSHA's 1989 Air Contaminants Rule, including the specific PEL's for wood dust that OSHA had established at that time. The 1989 vacated PEL's were: 5 mg/m3 PEL-TWA and 10 mg/m3 STEL (15 min), all softwood and hardwood except Western Red Cedar. Wood dust is now regulated by OSHA as "Particulates Not Otherwise Regulated" (PNOR), which is also referred to as "nuisance dust". However, some states have regulated wood dust PEL's in their state plans. Additionally, OSHA indicated that it may cite employers under the OSH Act general duty clause in appropriate circumstances.

[B] This ingredient is the polymerized form of MDI resin.

Ventilation:

LOCAL EXHAUST – Provide local exhaust as needed so that exposure limits are met. Ventilation to control dust should be considered where potential explosive concentrations and ignition sources are present. The design and operation of any exhaust system should consider the possibility of explosive concentrations of product dust within the system. See "SPECIAL" section below. Use of tool mounted exhaust systems should also be considered, especially when working in enclosed areas.

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

SPECIAL – Ensure that exhaust ventilation and material transport systems involved in handling this product contain explosion relief vents or suppression systems designed and operated in accordance with applicable standards if the operating conditions justify their use.

OTHER ENGINEERING CONTROLS – Cutting and machining of product should preferably be done outdoors or with adequate ventilation and containment.

8. Exposure Control Measures/Personal Protection (cont'd.)

Personal Protective Equipment:

RESPIRATORY PROTECTION – Use filtering face piece respirator ("dust mask") tested and approved under appropriate government standards such as NIOSH (US),CSA (Canada), CEN (EU), or JIS (Japan) where ventilation is not possible and exposure limits may be exceeded or for additional worker comfort or symptom relief. Use respiratory protection in accordance with jurisdictional regulatory requirements similar to the OSHA respiratory protection standard 29CFR 1910.134 following a determination of risk from potential exposures.

EYE PROTECTION – Approved goggles or tight fitting safety glasses are recommended when excessive exposures to dust may occur (e.g. during clean up) and when eye irritation may occur.

PROTECTIVE GLOVES – Cloth, canvas, or leather gloves are recommended to prevent direct contact and to minimize potential slivers or mechanical irritation from handling product.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT – Outer garments which cover the arms may be desirable in extremely dusty areas.

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

9. Physical/Chemical Properties

Appearance: TimberStrand® LSL products consist of layers of laminated solid wood which are glued together with a polymerized MDI resin. The product has a slightly aromatic/wood odor. The wood component consists of hardwoods.

Odor/Odor Threshold(s):	NAV
pH:	NAP
Melting/Freezing Point:	NAP
Boiling Point (@ 760 mm Hg) and Range:	NAP
Flash Point:	NAP
Evaporation Rate:	0
Flammability:	NAP
Lower/Upper Explosive Limits:	40,000 mg of dust per cubic meter of air is often used as the LEL for wood dusts.
Vapor Pressure (mm Hg):	NAP
Vapor Density (air = 1; 1 atm):	NAP
Relative Density:	NAP
Solubility:	<0.1
Partition Coefficient (n-octonal/water):	NAP
Autoignition Temperature:	Variable [typically 400°-500°F (204°-260°C)]
Decomposition Temperature:	NAV
Viscosity:	NAP
Other Properties:	NAP

10. Stability and Reactivity

Reactivity: NAP

Hazardous Polymerization: ☐ May occur ☒ Will not occur

Stability: ☐ Unstable ☒ 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 and drying oils.

10. Stability and Reactivity (cont'd.)

Hazardous Decomposition or By-Products: Natural decomposition of organic materials such as wood may produce toxic gases and an oxygen deficient atmosphere in enclosed or poorly ventilated areas. Spontaneous and rapid hazardous decomposition will not occur.

Sensitivity to Static Discharge: Airborne wood and resin dust may be ignited by a static discharge depending on airborne concentrations, particle size and moisture content.

11. Toxicological Information

Likely Route(s) of Exposure:

- ☐ Ingestion:
- ☒ Skin: Dust
- ☒ Inhalation: Dust
- ☒ Eye: Dust

Signs and Symptoms of Exposure:

Wood Dust - NTP: According to its Report on Carcinogens, Fourteenth Edition, NTP states, "Wood dust is known to be a human carcinogen based on sufficient evidence of carcinogenicity from studies in humans". An association between wood dust exposure and cancer of the nasal cavity has been observed in case reports, cohort studies, and case-control studies that specifically addressed nasal cancer. Associations with cancer of the nasal cavities and paranasal sinuses were observed both in studies of people whose occupations are associated with wood dust exposure and in studies that directly estimated wood dust exposure. This classification is based primarily on increased risk in the occurrence of adenocarcinomas of the nasal cavities and paranasal sinuses associated with exposure to wood dust. The evaluation did not find sufficient evidence to associate cancers of the oropharynx, hypopharynx, lung, lymphatic and hematopoietic systems, stomach, colon or rectum with exposure to wood dust. There is inadequate evidence for the carcinogenicity of wood dust from studies in experimental animals according to NTP.

Wood Dust: 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 to 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.

Carcinogenicity Listing(s):

- ☒ NTP: Wood dust, Known Human Carcinogen.
- ☒ IARC Monographs: Wood dust, Group 1 - Carcinogenic to Humans.
- ☐ OSHA Regulated:

Toxicity Data: No specific information available for product in purchased form. Individual component information is listed below.

Components:

Wood dust (softwood or hardwood)

Dusts generated from sawing, sanding or machining the product may cause respiratory irritation, nasal dryness and irritation, coughing and sinusitis. NTP and IARC (Group 1) classify wood dust as a human carcinogen. See Section 2 above.

Target Organs: Eyes, skin, and respiratory system.

Note: Weyerhaeuser evaluated the studies referenced in the ACGIH® TLV® Documentation for Wood Dust and others which included potential allergenic references for wood species which may cause skin or respiratory sensitization. There are a limited number of studies of highly variable consistency which reference sensitization from some species of wood. When the total weight of evidence is considered this product is considered to be an eye, skin and respiratory irritant and not a respiratory or skin sensitizer according to health hazard classification criteria.

12. Ecological Information

Ecotoxicity: NAV for finished product.
Biopersistance and Degradability: The wood portion of this product would be expected to be biodegradable.
Polymeric MDI
The effects from a simulated accidental pollution event in a pond with polymeric MDI on different trophic levels of the aquatic ecosystem were investigated (Heimbach F. et.al., 1996). Neither monomeric MDI nor its potential reaction product MDA (4, 4'-diphenylmethanediamine) was detected in water or accumulated by fish. The MDI polymerized to inert polyurea on the sediment of the test ponds. This polymerization formed carbon dioxide, released as bubbles which floated to the water surface. There was no direct effect on the pelagic community (phytoplankton, zooplankton, fish, and macrophytes) of the test ponds.
Bioaccumulation: NAV
Soil Mobility: NAV
Other adverse effects: NAP

13. Disposal Considerations

Waste Disposal Method: Dry land disposal or incineration is acceptable in most areas. It is, however, the user's responsibility to determine at the time of disposal whether your waste meets any jurisdictional criteria. Note that wood and resin dust may pose a combustible dust hazard.

14. Transport Information

Mode: (air, land, water) 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. Not regulated as a hazardous material by IMDG or IATA regulations concerning the transport of hazardous materials.

UN Proper Shipping Name:	NAP
UN/NA ID Number:	NAP
Hazard Class:	NAP
Packing Group:	NAP
Environmental Hazards (Marine Pollutant):	NAP
Special Precautions:	NAP

15. Regulatory Information

TSCA: Polymeric diphenylmethane diisocyanate (MDI) is on the TSCA inventory.
CERCLA: NAP
DSL: Polymeric diphenylmethane diisocyanate (MDI) is on the Canada DSL.
OSHA: Wood products are not hazardous under the criteria of the federal OSHA Hazard Communication Standard 29 CFR 1910.1200. However, dust generated by sawing, sanding or machining this product is considered hazardous.

15. Regulatory Information (cont'd.)

STATE RIGHT-TO-KNOW:
California Proposition 65 –

⚠ **WARNING**: This product can expose you to chemicals including wood dust which are known to the State of California to cause cancer, and methanol, which are known to the State of California to cause birth defects or other reproductive harm. Drilling, sawing, sanding or machining wood products can expose you to wood dust. Avoid inhaling wood dust or use a dust mask or other safeguards for personal protection. For more information go to www.P65Warnings.ca.gov and www.P65Warnings.ca.gov/wood.

Pennsylvania – When cut or otherwise machined, the product may emit wood dust. Wood dust and paraffin wax appear on Pennsylvania's Appendix A, Hazardous Substance List.
New Jersey – When cut or otherwise machined, the product may emit wood dust. Wood dust is on the New Jersey Environmental Hazardous Substance List.

SARA 313 Information: To the best of our knowledge, this product contains no chemical subjected to the SARA Title III Section 313 supplier notification requirements.
SARA 311/312 Hazard Category: This product has been reviewed according 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 corrosive hazard	No
A fire hazard	No
A reactivity hazard	No
A sudden release hazard	No

FDA: Not intended for use as a food additive or indirect food contact item.
WHMIS Classification: Wood and products made from wood are exempt from WHMIS per the Hazardous Products Act (HPA). However, wood dust released during the use or modifications of wood products may be hazardous. See Section 2 for health and combustible dust hazard information.

16. Other Information

Date Prepared: 10/20/2014
Date Revised: 08/27/2018
Prepared By: Weyerhaeuser Company Health and Safety.
Weyerhaeuser SDS available on:
http://www.wy.com/sustainability/environment/product-stewardship/safety-data-sheets/
User's Responsibility: The information contained in this 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 the product is suitable for its proposed application(s) and to follow necessary safety precautions. The user has the responsibility to ensure that the most current SDS is used.

16. Other Information (cont'd.)

Definition of Common Terms:

ACGIH®	=	American Conference of Governmental Industrial Hygienists
C	=	Ceiling Limit
CAS#	=	Chemical Abstracts System Number
DOT	=	U. S. Department of Transportation
DSL	=	Domestic Substance List
EC#	=	Identifying Number Assigned to Chemicals Contained in the European Inventory of Existing Chemical Substances (EINECS)
EC_{50}	=	Effective Concentration That Inhibits the Endpoint to 50% of Control Population
EPA	=	U.S. Environmental Protection Agency
GHS	=	Globally Harmonized System of Classification and Labelling of Chemicals
HMIS	=	(Canada) Hazardous Materials Identification System
HNOC	=	Hazards Not Otherwise Classified
IARC	=	International Agency for Research on Cancer
IATA	=	International Air Transport Association
IMDG	=	International Maritime Dangerous Goods
LC_{50}	=	Concentration in Air Resulting in Death To 50% of Experimental Animals
LCLo	=	Lowest Concentration in Air Resulting in Death
LD_{50}	=	Administered Dose Resulting in Death to 50% of Experimental Animals
LDLo	=	Lowest Dose Resulting in Death
LEL	=	Lower Explosive Limit
LFL	=	Lower Flammable Limit
MSHA	=	Mine Safety and Health Administration
NAP	=	Not Applicable
NAV	=	Not Available
NIOSH	=	National Institute for Occupational Safety and Health
NFPA	=	National Fire Protection Association
NPRI	=	(Canada) National Pollution Release Inventory
NTP	=	National Toxicology Program
OSHA	=	Occupational Safety and Health Administration
PEL	=	Permissible Exposure Limit
PNOR	=	Particulate Not Otherwise Regulated
PNOS	=	Particulate Not Otherwise Specified
RCRA	=	Resource Conservation and Recovery Act
STEL	=	Short-Term Exposure Limit (15 minutes)
STP	=	Standard Temperature and Pressure
TCLo	=	Lowest Concentration in Air Resulting in a Toxic Effect
TDG	=	(Canada) Transportation of Dangerous Goods
TDLo	=	Lowest Dose Resulting In a Toxic Effect
TLV	=	Threshold Limit Value
TSCA	=	Toxic Substance Control Act
TWA	=	Time-Weighted Average (8 hours)
UFL	=	Upper Flammable Limit
WHMIS	=	(Canada) Workplace Hazardous Materials Information System

TimberStrand® LSL

Danger

Wood dust may cause nasopharyngeal cancer and/or cancer of the nasal cavities and paranasal sinuses by inhalation. May cause respiratory, skin and eye irritation.

May form combustible dust concentrations in air if small particles are formed during processing or handling.

Precautions: Do not handle until all safety precautions have been read and understood. Use outdoors or in a well-ventilated area. Avoid breathing dust and wear appropriate protective equipment for respiratory, skin or eye exposures. Prevent dust release and accumulations to minimize hazards. Take off contaminated clothing and wash before reuse. Keep dust away from ignition sources such as heat, sparks, and flame.

First Aid:

If in eyes, rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Contact a qualified medical professional if symptoms persist.

If on skin, wash with soap and water. If skin irritation or rash occurs, get medical advice/attention.

Inhalation, if experiencing respiratory symptoms, remove to fresh air. Contact a qualified medical professional for serious or persistent respiratory symptoms.

Weyerhaeuser

220 Occidental Ave S.

Seattle, WA 98104

1-800-525-5440

Weyerhaeuser

Label for TimberStrand® LSL products. See SDS 8/2018 for additional information.