Material Safety Data Sheet

RedLam™ Laminated Veneer Lumber (LVL) (Not Preservative Treated):

Particles may be generated by any manual or mechanical cutting or abrasion process performed on wood.

www.RedBuilt.com

RedBuilt LLC
PO Box 60
Boise, ID 83707

Emergency Phone: (208) 364-1200
Additional Information: (208) 364-1200
CHEMTREC: (800) 424-9300
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1. Product Identification

Product	Manufacturing Location(s)
RedLam(TM) (Not Preservative Treated)	**USA:** Stayton, OR

Synonyms: None

2. Hazardous Ingredients/Identity Information

Name	CAS#	%	Agency	Exposure Limits	Comments
Wood	None	90-99	OSHA	PEL-TWA 15 mg/m^3	Total dust (PNOR)
			OSHA	PEL-TWA 5 mg/m^3	Respirable dust fraction (PNOR)
			ACGIH	TLV-TWA 1 mg/m^3	Inhalable
			Recommended [A]	PEL-TWA 5 mg/m^3	Softwood or hardwood total dust
			Recommended [A]	PEL-STEL 10 mg/m^3	Softwood or hardwood total dust
Phenol formaldehyde or Phenol-resorcinol formaldehyde resin solids [B, C]	9003-35-4	1-9	OSHA OSHA ACGIH	PEL-TWA 0.75 ppm PEL-STEL 2 ppm TLV-Ceiling 0.3 ppm	Free gaseous formaldehyde
Paraffin wax [B]	8002-74-2	0-2	OSHA ACGIH	PEL-TWA 2 mg/m^3 TLV-TWA 2 mg/m^3	Paraffin wax fume Paraffin wax fume

[A] Recommended exposure limits based on 1989 OSHA PELs. In 1992, the U.S. Court of Appeals for the Eleventh Circuit Court overturned OSHA's 1989 Air Contaminants Rule, which included specific PELs for wood dust established by OSHA at that time. Wood dust is now officially regulated as an organic dust in a category known as "Particulates Not Otherwise Regulated" (PNOR), or Nuisance Dust. However, a number of states have incorporated the OSHA PELs from the 1989 standard in their state plans. Additionally, OSHA has announced that it may cite companies under the OSH Act general duty clause under appropriate circumstances for noncompliance with the 1989 PELs.

[B] The VOC content of adhesives and sealants used are equal or less than the current VOC content limits of South Coast Air Quality Management District (SCAQMD) Rule #1168, AND all sealants used as fillers meet or exceed the requirements of the Bay Area Air Quality Management District Regulation 8, Rule 51.

[C] These products contain less than 0.05% free formaldehyde and contain no urea-formaldehyde resins. Phenol formaldehyde resin is used in face/surface material and/or center/core material.

3. Hazard Identification

Exposure:

Routes of Entry:	Signs & Symptoms
☐ Ingestion	Not Likely
☒ Skin	Rash, persistant irritation, and dermatitis.
☒ Inhalation	Respiratory irritation, nasal dryness, coughing, sneezing, and wheezing.
☒ Eye	Irritation

Emergency & First Aid:

INGESTION: Not applicable under normal use.

EYE CONTACT: Wood dust may cause mechanical irritation. Treat dust in eye as foreign object. Flush with water to remove dust particle. Seek medical help if irritation persists.

SKIN CONTACT: Seek medical help if rash, irritation or dermatitis persists.

INHALATION: Remove to fresh air. Seek medical help if persistent irritation, severe coughing, allergic-type responses or breathing difficulty occurs.

Carcinogenicity Listing:

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

NTP: (Wood Dust) According to its Tenth Report on Carcinogens, 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 nose has been observed in many case reports, cohort studies, and case-control studies that specifically addressed nasal cancer. Strong and consistent 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."

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

IARC – Group 1: (Formaldehyde) Carcinogenic to Humans. 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. 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. Rats exposed to 14 ppm of formaldehyde for 24 months in the laboratory developed nasal cancer. Exposure of 6 ppm did not result in statistically significant levels of nasal cancer.

4. Fire and Explosion Data

Flash Point (Method Used): N/A

Flammable Limits: **LFL =** See "Unusual Fire and Explosion Hazards"below **UFL =** N/A

Extinguishing Media: Water, carbon dioxide, sand

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

Special Firefighting Procedures: None

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

5. Accidental Release Measures

Steps to be Taken In Case Material Is Released or Spilled: Sweep up or vacuum up spills for recovery or disposal. Avoid creating dusty conditions whenever feasible. Assess situation and control potential explosion and exposure hazards. Place recovered wood dust in a container for proper disposal.

6. Handling and Storage

Precautions to be Taken In Handling and Storage: No special handling precautions are required for products in purchased form. Avoid repeated or prolonged breathing of wood dust. These products may release very small quantities of formaldehyde in gaseous form. Under foreseeable conditions of use, these products release less than 0.10 ppm in standard large chamber test conditions. Store in well-ventilated, cool, dry place away from open flame.

7. Exposure Control Measures, Personal Protection

Personal Protective Equipment:

RESPIRATORY PROTECTION – A NIOSH-approved filtering face piece respirator ("dust mask") or higher level of particulate protection depending on concentration is recommended when exposure limits may be exceeded.

EYE PROTECTION –Goggles or safety glasses are recommended when excessive exposures to wood dust may occur (e.g. during clean up).

PROTECTIVE GLOVES – Not required. However, 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 dust settles to avoid excessive accumulation of this combustible material. Minimize blowdown or other practices that generate high airborne-dust concentrations.

Ventilation:

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

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

SPECIAL – N/A

OTHER – N/A

8. Physical/Chemical Properties

Physical Description: Red-I™Joists consist of a ligno cellulosic matrix of interlocking wood fibers having a slightly aromatic odor.

Boiling Point (@ 760 mm Hg):	N/A
Evaporation Rate (Butyl Acetate = 1):	N/A
Melting Point:	N/A
Solubility in Water (% by weight):	Insoluble
Specific Gravity (H_2O = 1):	Variable; depends on wood species and moisture
Vapor Density (air = 1; 1 atm):	N/A
Vapor Pressure (mm Hg):	N/A

9. Stability and Reactivity

Stability: ☐ Unstable ☒ Stable

Conditions to Avoid: Avoid open flame. Product may ignite at temperatures in excess of 400℉ (204℃).

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

Hazardous Decomposition or By-Products: Spontaneous and rapid hazardous decomposition will not occur. 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, resin acids, terpenes, and polycyclic aromatic hydrocarbons.

Hazardous Polymerization: ☐ May occur ☒ Will not occur

10. Disposal Considerations

Waste Disposal Method: Incineration in accordance with local, state, and federal regulations is preferred because fugitive emissions can be effectively controlled. Landfill disposal in accordance with local, state, and federal regulations is acceptable if actions are taken to contain the material until it can be covered by other wastes or landfill cover materials.

11. Regulatory Information

OSHA: Untreated wood and wood products are considered exempt under OSHA's Hazard Communication Standard 29 CFR 1910.1200. Wood dust is a by-product generated from sawing, sanding, or machining wood and wood products, and is considered hazardous. Wood dust is regulated under the Hazard Communication Standard 29 CFR 1910.1200

State: Wood dust is known to the State of California to cause cancer.

12. Additional Information

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