LP BUILDING PRODUCTS

LP® SolidStart® LVL

1. Product and Company Information

Product Code: Not applicable
Product Name: Laminated Veneer Lumber
Brand Names: LP® SolidStart® LVL

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2. Composition and Ingredient Information

Component	% by Weight	CAS #	Exposure Limits	Cancer Designation
Wood[1]	90-99	NA	TLV-TWA = 1 mg/m^3	MAK-1, NIOSH-Ca, TLV-A1, NTP-K
Phenol-Formaldehyde Resin Solids • Formaldehyde [2]	1-9 <0.1	9003-35-4 50-00-0	None PEL-TWA 0.75 ppm PEL-STEL 2 ppm TLV-Ceiling 0.3 ppm	NA EPA-B1, IARC-1, NIOSH-Ca, NTP-R, OSHA-Ca, TLV-A2, MAK-3B
Edge, End and Surface Sealer	<1	NA	No hazardous components per OSHA Guidelines	NA
Bifenthrin[3]	<0.015	82657-04-3	No exposure limits assigned to this material	EPA-C

[1] PNOS: PEL-TWA = 15 mg/m^3, total dust; PEL-TWA = 5 mg/m^3, respirable fraction; TLV-TWA = 10 mg/m^3 inhalable particulate, 3 mg/m^3 respirable particulate.

[2] These products may contain trace (<0.1% by weight) amounts of free formaldehyde, which may be released depending on concentration and environmental conditions. Large scale chamber studies conducted by APA Engineered Wood Association have shown that these finished products off gas free formaldehyde at levels less than 0.041 ppm.

[3] Found in treated versions of these wood products.

3. Hazards Identification

Emergency Overview

- Contact with strong oxidizers or exposure to temperatures greater than 400˚ F (204˚ C) may cause a fire.
- Smoke may contain carbon monoxide, aldehydes, and other toxic materials.
- Airborne wood and resin dust may explode when combined with an ignition source.

Potential Health Effects (based on expected use of product)

- EYES: Dust may irritate the eyes.
- SKIN: Dust may cause skin irritation.
- INGESTION: Not Known
- INHALATION: Dust can cause irritation to mucous membranes and the upper respiratory tract. Wood dust is considered to be carcinogenic.

4. First Aid Measures

- EYES: For dust exposure, immediately flush eyes with plenty of water for at least 15 minutes.
- SKIN: Wash with soap and water. Get medical attention if irritation develops or persists.
- INGESTION: Consult a physician.
- INHALATION: Remove to fresh air, consult a physician.

Note to Physicians: Exposure to dust may aggravate symptoms of persons with pre-existing respiratory tract conditions and may cause skin and gastrointestinal symptoms.

5. Fire Fighting Measures

FLAMMABLE PROPERTIES:
- Flash point: Not applicable.
- Combustible: Material may burn on contact with oxidizers or ignition sources.

FLAMMABLE LIMITS:
- Lower flammable limit: Not applicable.
- Upper flammable limit: Not applicable.

AUTOIGNITION TEMPERATURE: Typically 400-500˚ F (204-260˚ C).

EXPLOSION HAZARD: Airborne concentrations of combustible dust, when combined with an ignition source, can create an explosion hazard if the dust concentration exceeds 30 - 60 g/m^3.

HAZARDOUS COMBUSTION PRODUCTS: Carbon dioxide, carbon monoxide, nitrogen oxides, aldehydes, cyanides, and other hazardous gases, vapors, and particles.

EXTINGUISHING MEDIA: Water, dry chemical and other agents rated for a wood fire (Type A fire). Use an extinguisher rated for a Type A fire.

FIRE FIGHTING INSTRUCTIONS: Evacuate the area and notify the fire department. If possible isolate the fire by moving other combustible materials. If the fire is small, use a hose-line or extinguisher rated for a Type A fire. If possible, dike and collect water used to fight fires. Fire fighters should wear normal protective equipment (full bunker gear) and positive-pressure self-contained breathing apparatus.

6. Accidental Release Measures

Does not apply.

7. Handling and Storage

HANDLING: Provide ventilation or other measures so that dust levels are below the exposure limits listed in Section 2.

STORAGE: Keep dust away from ignition sources and store in a closed container. Consult NFPA 68 and 70 for additional information.

8. Exposure Control / Personal Protection

ENGINEERING CONTROLS: Control airborne dust concentrations below the exposure limits. Use only with adequate ventilation.

RESPIRATORY PROTECTION: When respiratory protection is required, or dust concentrations are unknown, use a NIOSH/MSHA approved air-purifying respirator for dusts.

SKIN PROTECTION: Wear work gloves to prevent skin irritation.

EYE PROTECTION: Wear ANSI approved eye protection.

9. Physical and Chemical Properties

BOILING POINT:	NA	DENSITY:	28 - 70 lb/ft³ (448 - 1121 kg/m³)
MELTING POINT:	NA	pH:	NA
VAPOR PRESSURE:	NA	ODOR:	Slight to none
VAPOR DENSITY:	NA	APPEARANCE:	Light brown wood products
SOLUBILITY IN WATER:	NA		

10. Stability and Reactivity

CHEMICAL STABILITY: (CONDITIONS TO AVOID) Stable.

INCOMPATIBILITY: Keep away from high temperatures and strong oxidizers, such as concentrated nitric acid, oxygen, hydrogen peroxide, and chlorine.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, hydrogen cyanide, and other products of wood combustion.

HAZARDOUS POLYMERIZATION: Will not occur.

11. Toxicological Information for Wood Dust, Formaldehyde & Bifenthrin

WOOD DUST: Wood dust is known to be a human carcinogen. An increased incidence of adenocarcinoma of the nasal cavities and paranasal sinuses was observed in studies of people whose occupations are associated with wood dust exposure. (10th Edition of the National Toxicology Program's Report on Carcinogens) Wood dust from some tree species may induce sensitization.

FORMALDEHYDE:

Chronic (Cancer) Information: See Section 2 for carcinogenicity categories.
Teratology (Birth Defect) Information: NA
Reproduction Information: Reproductive effects in animals have been reported in RTECS for formaldehyde.
Sensitizer: Exposure to low doses of formaldehyde may cause sensitization.
International Formaldehyde Emissions Classifications:

- Australia: This product meets EWPAA requirements for a E_0 emissions class product with formaldehyde emissions less than or equal to 0.041 ppm (0.5 mg/L).
- Japan: This product meets JAS requirements for F★★★★ class of performance with formaldehyde emissions on average less than 0.3 mg/L and maximum less than 0.4 mg/L.

BIFENTHRIN: Bifenthrin is present in very low concentrations (<0.015%) and should not present a health hazard. Bifenthrin is not classified as a carcinogen by IARC, NTP, OSHA and ACGIH. The EPA has classified bifenthrin as a Group C possible human carcinogen based on the limited evidence of carcinogenicity in animals and in the absence of human data.

12. Ecological Information

UNTREATED PRODUCT: These wood products are not expected to pose an ecological hazard as a result of their intended uses.

TREATED PRODUCT: Information/data presented below is for the active ingredient, bifenthrin, which is a component in treated versions of these wood products.

ECOTOXICOLOGICAL INFORMATION: The active ingredient, bifenthrin, is highly toxic to fish and aquatic arthropods with LC_{50} values ranging from 0.0038 to 17.8 mg/L. In general, the aquatic arthropods are the most sensitive species. Care should be taken to avoid contamination of the aquatic environment. Bifenthrin had no effect on mollusks at its limit of water solubility. Bifenthrin is only slightly toxic to both waterfowl and upland game birds (LC_{50} values range from 1800 mg/kg to >2,150 mg/kg).

ENVIRONMENTAL DATA: The active ingredient, bifenthrin, has moderate stability in the soil under aerobic conditions (half life range from 65-125 days depending on soil type) and is stable at a wide range of pH values. Bifenthrin has a high Log Pow (>6.0), a high affinity for organic matter, and is not mobile in soil. Therefore, there is little potential for movement into ground water. There is the potential for bifenthrin to bioconcentrate (BCF=11,750).

13. Disposal Considerations

Dispose of waste according to local, state/provincial, and federal requirements.

14. Transportation Information

Hazardous Materials Table 172.101

Shipping Name	NA	Packing Group	NA
Hazard Class	NA	Placards/Labels	NA
Identification No.	NA	Special Provisions	NA

15. Regulatory Information

OSHA: Hazard Communication	CFR 1910.1200 (b)(6)(iv)	CERCLA RQ:	NA
EPCRA EHS RQ Section 302:	NA	EPA CAA Section 112(r):	NA
EPCRA Section 313:	NA	Uniform Fire Code:	NA

16. Other Information

This MSDS is intended solely for safety education and not for use as specifications or warranties. The information in this MSDS was obtained from usually reliable sources and is provided without any representation for warranties regarding the accuracy or correctness. Since the handling, use, and storage is beyond our control, LP assumes no responsibility and disclaims liability for any loss, damage, or expense arising therefrom.

Abbreviations

ANSI	American National Standards Institute
ASTM	American Society for Testing and Materials
BCF	Bioconcentation factor
C	Ceiling
CAA	Clean Air Act
CAS	Chemical Abstract Services (identifies specific chemical)
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CFR	Code of Federal Regulations
Dust	A finely divided solid 0.017 in. or less in diameter that is capable of passing through a U.S. No. 40 standard sieve
EHS	Extremely Hazardous Substance
EPA-B1	Environmental Protection Agency-Limited evidence of carcinogenicity from epidemiological studies
EPCRA	Emergency Planning and Community Right-To-Know Act
EWPAA	Engineered Wood Products Association of Australasia
g/m^3	Grams per cubic meter
IARC-2A	International Agency for Research on Cancer-Probably Carcinogenic to Humans
IARC-3	Unclassifiable as to carcinogenicity to humans
JAS	Japanese Agricultural Standards
kg/m^3	Kilograms per cubic meter
lb/ft^3	Pounds per cubic foot
LC_{50}	Median lethal concentration
Log Pow	Log octanol water partition coefficient (Hansch Coefficient)
mg/L	Micrograms per liter
mg/m^3	Milligrams per cubic meter
mg/kg	Milligrams per kilogram
mg/L	Milligrams per liter
MAK-1	Substances that cause cancer in humans
MAK-3	Substances which cause concern that they could be carcinogenic for humans
MAK-3B	Substances for which in vitro tests or animal studies have yielded evidence of carcinogenic effects
MSHA	Mine Safety Health Act
NA	Not applicable
NFPA	National Fire Protection Association
NIOSH-Ca	National Institute of Occupational Safety and Health-Potential occupational carcinogen, with no further categorization
NTP-K	National Toxicology Program-Known to be a carcinogen
NTP-R	National Toxicology Program-Reasonably anticipated to be a carcinogen
OSHA-Ca	Occupational Safety and Health Administration-Carcinogen defined with no further categorization
PNOS	Particle not otherwise specified
PEL	OSHA Permissible Exposure Limit
ppm	Parts per million
ppt	Parts per trillion
RTECS	Registry of Toxic Effects of Chemical Substances
RQ	Reportable Quantity
STEL	Short-Term Exposure Limit
TLV-A1	Threshold Limit Value-Confirmed Human Carcinogen
TLV-A2	Threshold Limit Value-Suspected Human Carcinogen
TWA	8-hour time-weighted average exposure

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