

Material Safety Data Sheet



LP® SolidStart® LSL

1. PRODUCT AND COMPANY INFORMATION

Product Code: Not applicable
Product Name: Laminated Strand Lumber (LSL)
Brand Name: LP SolidStart LSL
Company: LP Building Products, 414 Union Street, Suite 2000, Nashville, TN, USA 37219
Telephone: 888.820.0325, +1.615.986.5600 for International Callers

2. COMPOSITION AND INGREDIENT INFORMATION

Component	% by Weight	CAS #	Exposure Limits	Cancer Designation
Wood	92-95	N/A	PNOS ⁽¹⁾ TLV-TWA = 1 mg/m ³ (8-hr) WES-TWA = 1 mg/m ³ (8-hr)	IARC-1, NIOSH-Ca NTP-K, TLV-A1
Polyurea / Polyurethane Solids ⁽²⁾	4-7	N/A	N/A	N/A
Zinc Borate ⁽³⁾	0-3	138265-88-0	PNOS ⁽¹⁾	N/A
Paraffin Wax	0-2	8002-74-2	PEL-TWA 2 mg/m ³ TLV-TWA 2 mg/m ³	N/A
Edge and End Sealant	<1	N/A	No hazardous components per OSHA Guidelines	N/A

- (1) PNOS: PEL-TWA = 15 mg/m³, total dust; PEL-TWA = 5 mg/m³, respirable fraction; TLV-TWA = 10 mg/m³ inhalable particulate, 3 mg/m³ respirable particulate.
- (2) This ingredient is a cured, inert and polymerized form of polymeric diphenylmethane diisocyanate (pMDI) adhesive. No formaldehyde or urea-formaldehyde adhesives are used in the manufacturing of this product.
- (3) This ingredient can be found primarily in treated versions of these wood products. Trace amounts may be found in untreated versions. Zinc borate is a wood preservative/pesticide and registered with the U.S. EPA as a pesticide.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

- Contact with strong oxidizers or exposure to temperature greater than 400°F (204°C) may cause a fire.
- Smoke from combustion may contain carbon monoxide, aldehydes and other toxic materials.
- Airborne wood 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:** Not applicable under normal product use.
- **INHALATION:** Remove to fresh air, consult a physician.
- **NOTE TO PHYSICIANS:** Exposure to wood dust may aggravate symptoms in persons with pre-existing respiratory tract conditions and may cause skin or gastrointestinal symptoms.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES:

- Flash point: N/A
- Combustible: Material may burn on contact with oxidizers or ignition sources.

FLAMMABLE LIMITS:

- Lower flammable limit: N/A
- Upper flammable limit: N/A

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

EXPLOSION HAZARD: Depending on moisture content and particle size, airborne wood dust may explode in the presence of an ignition source. Combustion is likely with dust concentrations greater than 30 - 60 g/m³.

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

EXTINGUISHING MEDIA: Extinguish with water, sand, dry chemicals or other agents rated for a Type A wood fire. Use a fire extinguisher rated for Type A fires.

FIRE FIGHTING INSTRUCTIONS: Evacuate the area and notify the fire department. If possible isolate the fire by moving other combustible materials away from the fire location. 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 (SCBA).

6. ACCIDENTAL RELEASE MEASURES

Does not apply.

7. HANDLING AND STORAGE

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

STORAGE: Keep dust away from ignition sources. Consult NFPA 68 and 70 for additional information.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

ENGINEERING CONTROLS: Control airborne dust concentrations below exposure limits. Processing and storage areas should possess adequate ventilation.

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

SKIN PROTECTION: Wear work gloves to prevent skin irritation.

EYE PROTECTION: Wear ANSI approved eye protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point:	N/A	Density:	28 – 70 lb/ft ³ (448 – 1,121 kg/m ³)
Melting Point:	N/A	pH:	N/A
Vapor Pressure:	N/A	Odor:	Slight to none
Vapor Density:	N/A	Appearance:	Light brown wood products
Solubility in Water:	N/A		

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable.

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

HAZARDOUS DECOMPOSITION PRODUCTS: Wood combustion can release carbon monoxide, hydrogen cyanide and other toxic materials.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

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.

ZINC BORATE:

Acute Toxicity

- Ingestions – Low acute oral toxicity LD₅₀ in rats is greater than 10,000 mg/kg of body weight.
- Skin/dermal – Low acute dermal toxicity; LD₅₀ in rabbits is greater than 10,000 mg/kg of body weight. Zinc borate is poorly absorbed through intact skin.
- Skin irritation – Non-irritant
- Eye irritation – Draize test in rabbits produced mild eye irritation effects. Many years of occupational exposure to zinc borate indicates no adverse effects on human eyes. Therefore, zinc borate is not considered to be a human eye irritant in normal industrial use.
- Sensitization – Zinc borate is not a skin sensitizer.

NOTE: Zinc borate can decompose, under biological conditions, to form hydroxide and boric acid.

12. ECOLOGICAL INFORMATION

UNTREATED PRODUCTS: These wood products are not expected to pose an ecological hazard as a result of normal intended use.

12. ECOLOGICAL INFORMATION (CONT'D)

TREATED PRODUCTS: Ecological information presented in the remainder of Section 12 is for zinc borate. This ingredient would be primary found in treated versions of these wood products. Trace amounts of zinc borate may be present in untreated versions.

ZINC BORATE

ECOTOXICOLOGICAL INFORMATION:

- **General:** Both borate and zinc occur naturally in seawater at average concentrations of 5 mg/L boron and 8 microgram/L zinc or at lower concentrations, generally in fresh water. Zinc borate can decompose, under certain environmental conditions to form sparingly water-soluble zinc hydroxide and water-soluble boric acid.
- **Phytotoxicity:** Boron is an essential micronutrient for healthy growth of plants; however, it can be harmful to boron-sensitive plants in high quantities. Care should be taken to minimize the amount of zinc borate release to the environment.
- **Invertebrate Toxicity:** Daphnids (*Daphnia magna* straus) – 48-hr LC₅₀: 76 mg/L zinc borate
- **Fish Toxicity:** Freshwater rainbow trout (*S. gairdneri*) – 96 hr LC₅₀: 2.4 mg/L zinc borate
Bluegill (*Lepomis macrochirus*) – 96 hr LC₅₀: >335 mg/L zinc borate

ENVIRONMENTAL DATA:

- **Persistence/degradation:** under certain environmental conditions, zinc borate will slowly hydrolyze to form other inorganic chemicals such as zinc hydroxide and boric acid.
- **Soil Mobility:** Zinc borate is sparingly soluble in water and may be leachable through normal soil.

13. DISPOSAL CONSIDERATIONS

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

14. TRANSPORTATION INFORMATION

DOT CLASSIFICATION: Zinc borate is regulated as a hazardous material by the U.S. Department of Transportation (DOT), if transported in quantities greater than 1,000 pounds (454 kilograms) in one package. Since the amount of zinc borate in the product does not exceed this quantity, the U.S. DOT does not consider the product to be a hazardous material. Therefore, as shipped, this product is not regulated by the U.S. DOT.

TDB CLASSIFICATION: Zinc borate is regulated as a hazardous substance under Canadian Transportation of Dangerous Goods (TDB) regulation. However, as shipped, the amount of zinc borate in this product falls below the regulated limit of 110 pounds (50 kilograms). The product would not be considered a hazardous material by Canadian TDB.

INTERNATIONAL CLASSIFICATION: Zinc borate has no United Nations (UN) number and is not regulated under international rail, roads, water, or air transportation regulations. However, as shipped, the amount of zinc borate in this product falls below 1,000 pounds (454 kilograms) in one package and is not considered a hazardous material.

Proper Shipping Name: N/A
Hazard Class Number and Description: Not hazardous
UN ID Number: N/A
Packing Group: N/A
Information Reported for Product/Size: N/A

15. REGULATORY INFORMATION

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

STATE RIGHT-TO-KNOW DATA: This product is known to contain substances listed on the following State Right to Know (RTK) or Hazardous Substances Lists.

- California Proposition 65 Warning – Drilling, sawing, sanding or machining wood products generates wood dust, a substance known to the State of California to cause cancer.
- Pennsylvania – When cut or otherwise machined, this product may emit wood dust. Wood dust appears on Pennsylvania's Appendix A – Hazardous Substances Lists.
- Minnesota – Minnesota Statutes, 1984, Sections 144.495 and 325F.181 do not apply to this product. Those statutes apply to plywood, particleboard, MDF and other products manufactured with urea-formaldehyde adhesives.

16. OTHER INFORMATION

This Material Safety Data Sheet (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 there from.

ABBREVIATIONS

ACGIH	American Conference of Industrial Hygienists
ANSI	American National Standards Institute
CAA	Clean Air Act
CAS #	Chemical Abstract Services Number – Registry that identifies and discloses specific chemical information
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	Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-To-Know Act
EU	European Union
EWPA	Engineered Wood Products Association of Australasia
g/m ³	Grams per cubic meter
IARC	International Agency for Research on Cancer
IARC-1	IARC Group 1 – Carcinogenic to humans
kg/m ³	Kilograms per cubic meter
lb/ft ³	Pounds per cubic foot
mg/m ³	Milligrams per cubic meter
MDF	Medium density fiberboard
MSHA	Mine Safety Health Act
N/A	Not applicable
NFPA	National Fire Protection Association
NIOSH	National Institute of Occupational Safety and Health
NIOSH-Ca	NIOSH Classification – Potential occupational carcinogen, with no further categorization
NOHSC	National Occupational Health and Safety Commission (Australia)
NTP	National Toxicology Program
NTP-K	NTP Group K or 1 – Known to be a human carcinogen
OSH	Occupational Health and Safety (New Zealand)
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
PNOS	Particle not otherwise specified
ppm	Parts per million
RTECS	Registry of Toxic Effects of Chemical Substances

ABBREVIATIONS (CONT'D)

RQ	Reportable Quantity
TLV	Threshold Limit Value
TLV-A1	TLV Class A1 – Confirmed Human Carcinogen
TWA	Time-weighted average exposure
WES	Workplace Exposure Standards (New Zealand)

BIBLIOGRAPHY

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5. Integrated Risk Information System, EPA, on-line.
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9. Documentation of the TLVs[®], American Conference of Governmental Industrial Hygienists, 2002.
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11. TLVs[®] and BEIs[®], American Conference of Governmental Industrial Hygienists, 2003.
12. IARC bulletin No. 153.

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California Proposition 65 Warning: Use of this product may result in exposure to wood dust, known to the State of California to cause cancer.