

Material Safety Data Sheet



**TimberStrand LSL**

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**1. Product Identification**

Product	Manufacturing Location(s)
TimberStrand® LSL	<b>USA:</b> Chavies, KY; Deerwood, MN <b>Canada:</b> Kenora, ON

Synonyms: Header, Rimboard

**2. Hazardous Ingredients/Identity Information**

Name	CAS#	Percent	Agency	Exposure Limits	Comments
Wood	None	93-95	OSHA OSHA ACGIH ACGIH Recommended <sup>A</sup> Recommended <sup>A</sup> Recommended <sup>A</sup>	PEL-TWA 15 mg/m <sup>3</sup> PEL-TWA 5 mg/m <sup>3</sup> TLV-TWA 0.5 mg/m <sup>3</sup> TLV-TWA 1 mg/m <sup>3</sup> PEL-TWA 5 mg/m <sup>3</sup> PEL-STEL 10 mg/m <sup>3</sup> PEL-TWA 2.5 mg/m <sup>3</sup>	Total dust Respirable dust fraction Inhalable, Western red cedar Inhalable, All other species Softwood or hardwood total dust Softwood or hardwood total dust Western red cedar total dust
Resin Solids: <sup>B, C</sup> Polymeric Diphenylmethane Diisocyanate <sup>D</sup>	9016-87-9	4-6	OSHA ACGIH	None None	None
Co-Binder <sup>B</sup>	None	0-2	None	None	None
Paraffin wax <sup>B</sup>	8002-74-2	< 1	OSHA ACGIH	PEL-TWA 2 mg/m <sup>3</sup> TLV-TWA 2 mg/m <sup>3</sup>	Paraffin wax fume Paraffin wax fume

<sup>A</sup> Weyerhaeuser 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.

<sup>B</sup> 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.

## 2. Hazardous Ingredients/Identity Information (cont'd.)

<sup>C</sup> This product contains no urea-formaldehyde resins.

<sup>D</sup> This ingredient is the polymerized form of MDI resin. There is no detectable MDI monomer in the product as purchased.

## 3. Hazard Identification

**Appearance and Odor:** TimberStrand® consists of layers of laminated solid wood which are glued together with a polymerized methylene bisphenyl diisocyanate (MDI) resin. The product has a slightly aromatic/wood odor. The wood component may consist of hardwoods, not including cedar.

**Primary Health Hazards:** The primary health hazard posed by these products is thought to be due to inhalation of wood dust.

### Primary Route(s) of Exposure:

- Ingestion:
- Skin: Dust
- Inhalation: Dust
- Eye: Dust

**Medical Conditions Generally Aggravated by Exposure:** Wood dust may aggravate pre-existing respiratory conditions or allergies.

### Signs and Symptoms of Exposure:

**Acute Health Hazards:** Wood dust can cause eye irritation. Certain species of wood dust can elicit allergic contact dermatitis in sensitized individuals. Wood dust may cause respiratory irritation, nasal dryness, coughing, sneezing, and wheezing as a result of inhalation.

**Chronic Health Hazards:** Wood dust, depending on the species, may cause allergic contact dermatitis and respiratory sensitization with prolonged, repetitive contact or exposure to elevated dust levels. Prolonged exposure to wood dust has been reported by some observers to be associated with nasal cancer.

### Carcinogenicity Listing:

- NTP: Wood dust, *Known to be a Human Carcinogen*
- IARC Monographs: Wood dust, Group 1 – *Carcinogenic to humans*. Polymeric MDI, Group 3 – *Unclassifiable as to carcinogenicity to humans*.
- OSHA Regulated: Not listed

### 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:

#### Wood Dust

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

#### 4. Emergency and First-Aid Procedures

**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 particles. Get medical help if irritation persists.

**Skin Contact:** Wood dust of certain species can elicit allergic contact dermatitis in sensitized individuals, as well as mechanical irritation resulting in erythema and hives. Get medical help if rash, irritation or dermatitis persists.

**Skin Absorption:** Not known to occur under normal use.

**Inhalation:** Wood dust may cause unpleasant obstruction in the nasal passages, resulting in dryness of nose, dry cough, sneezing and headaches. Remove to fresh air. Seek medical help if persistent irritation, severe coughing or breathing difficulty occurs.

**Note to Physician:** None

#### 5. Fire and Explosion Data

**Flash Point (Method Used):** NAP

**Flammable Limits:** LFL = NAP

UFL = NAP

**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, wood dust may explode in the presence of an ignition source. 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.

**NFPA Rating (Scale 0-4):** Health = 1 Fire = 1 Reactivity = 0

#### 6. Accidental Release Measures

**Steps to be Taken In Case Material Is Released or Spilled:** Not applicable for products in purchased form. Wood dust generated from sawing, sanding, drilling, or routing of these products may be vacuumed or shoveled for recovery or disposal. Avoid dusty conditions and provide good ventilation. Use NIOSH-approved respirator and goggles where ventilation is not possible and the allowable exposure limits may be exceeded.

#### 7. 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. Product with 100% MDI adhesive, releases no formaldehyde. Store in well-ventilated, cool, dry place away from open flame.

#### 8. Exposure Control Measures, Personal Protection

**Personal Protective Equipment:**

**RESPIRATORY PROTECTION** – Not applicable for products in purchased form. A NIOSH-approved respirator is recommended when allowable exposure limits may be exceeded.

**PROTECTIVE GLOVES** – Not required. However, cloth, canvas, or leather gloves are recommended to minimize potential mechanical irritation from handling product.

**EYE PROTECTION** – Not applicable for product in purchased form. Goggles or safety glasses are recommended when machining these products.

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

OTHER PROTECTIVE CLOTHING OR EQUIPMENT – Not applicable for product in purchased form.

Outer garments 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 – None

OTHER – None

## 9. Physical/Chemical Properties

**Physical Description:** TimberStrand® consists 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 may consist of hardwoods, not including cedar

<b>Boiling Point (@ 760 mm Hg):</b>	NAP
<b>Evaporation Rate (Butyl Acetate = 1):</b>	NAP
<b>Freezing Point:</b>	NAP
<b>Melting Point:</b>	NAP
<b>Molecular Formula:</b>	NAP
<b>Molecular Weight:</b>	NAP
<b>Oil-water Distribution Coefficient:</b>	NAP
<b>Odor Threshold:</b>	NAP
<b>pH:</b>	NAP
<b>Solubility in Water (% by weight):</b>	<0.1
<b>Specific Gravity (H<sub>2</sub>O = 1):</b>	Variable; depends on wood species and moisture
<b>Vapor Density (air = 1; 1 atm):</b>	NAP
<b>Vapor Pressure (mm Hg):</b>	NAP
<b>Viscosity:</b>	NAP
<b>% Volatile by Volume (@ 70°F (21°C)):</b>	0

## 10. Stability and Reactivity

**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.

**Hazardous Decomposition or By-Products:** Thermal decomposition products include carbon monoxide, carbon dioxide, aliphatic aldehydes, rosin acids, terpenes, polycyclic aromatic hydrocarbons.

**Hazardous Polymerization:**  May occur  Will not occur

**Sensitivity to Mechanical Impact:** NAP

**Sensitivity to Static Discharge:** NAP

## 11. Toxicological Information

**Toxicity Data:** None available for product in purchased form. Individual component information is listed below if available.

**Components:**

Wood Dust (softwood or hardwood)

OSHA Hazard Rating = 3.3; moderately toxic with probable oral lethal dose to humans being 0.5-5 g/kg (about 1 pound for a 70 kg or 150 pound person.). Wood dust – generated from sawing, sanding or machining the product – may cause nasal dryness, irritation, coughing and sinusitis. NTP and IARC classify wood dust as a human carcinogen (IARC Group 1). 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.

Source: *OSHA Regulated Hazardous Substances*, Government Institutes, Inc., February 1990.

**Target Organs:** None

## 12. Ecological Information

**Environmental Fate:** No information available at this time.

**Environmental Toxicity:** No information available at this time.

## 13. Disposal Considerations

**Waste Disposal Method:** If disposed of or discarded in its purchased form, incineration is preferable.

Landfill disposal is acceptable in most states. It is, however, the user's responsibility to determine at the time of disposal whether your product meets RCRA criteria for hazardous waste. Follow applicable federal, state, and local regulations.

## 14. Transport Information

**Mode:** (land, air, 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.

<b>Proper Shipping Name:</b>	NAP
<b>Hazard Class:</b>	NAP
<b>UN/NA ID Number:</b>	NAP
<b>Packing Group:</b>	NAP
<b>Information Reported for Product/Size:</b>	NAP

## 15. Regulatory Information

**TSCA:** The following ingredients are on the TSCA inventory:

Polymeric Diphenylmethane Diisocyanate (CAS# 9016-87-9)

Paraffin wax (CAS# 8002-74-2)

Soybean Oil (CAS# 8001-22-7, (contained in Co-Binder ingredient)

**CERCLA:** NAP

## 15. Regulatory Information (cont'd.)

**DSL:** The following ingredients are on the Canadian Domestic Substance List inventory:

Polymeric Diphenylmethane Diisocyanate (CAS# 9016-87-9)

Soybean Oil (CAS# 8001-22-7)

Paraffin wax (CAS# 8002-74-2)

**OSHA:** Wood products are not hazardous under the criteria of the federal OSHA Hazard Communication Standard 29 CFR 1910.1200. However, wood dust generated by sawing, sanding or machining this product may be hazardous.

**STATE RIGHT-TO-KNOW:** This product is known to contain substances subject to the disclosure requirements of:

California Prop 65 – Not listed.

New Jersey – Not listed.

Pennsylvania – When cut or otherwise machined, this product may emit wood dust. Wood dust, Paraffin wax (CAS# 8002-74-2) and Soybean oil (CAS# 8001-22-7) appear on Pennsylvania's *Appendix A – Hazardous Substance Lists*.

Minnesota – Minnesota Statutes, 1984, Section 144.495 and 325F.181 do not apply to this product as TimberStrand does not contain formaldehyde.

**SARA 313 Information:** To the best of our knowledge, this product contains no chemical subject to 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 fire hazard:	No
A reactivity hazard:	No
A sudden release hazard:	No

**FDA:** NAP

**WHMIS Classification:** Not a controlled product.

## 16. Additional Information

**Date Prepared:** 9/21/00

**Date Revised:** 10/10/2005

**Prepared By:** Weyerhaeuser Company, Corporate Environment, Health & Safety

**Weyerhaeuser MSDS available on:** <http://www.weyerhaeuser.com/environment/msds/default.asp>

**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.

### 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

EC50 = Effective concentration that inhibits the endpoint to 50% of control population

## 16. Additional Information (cont'd.)

EPA	= U.S. Environmental Protection Agency
IARC	= International Agency for Research on Cancer
IATA	= International Air Transport Association
IMDG	= International Maritime Dangerous Goods
LC50	= Concentration in air resulting in death to 50% of experimental animals
LCLo	= Lowest concentration in air resulting in death
LD50	= 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
NPRI	= Canadian National Pollution Release Inventory
NTP	= National Toxicology Program
OSHA	= Occupational Safety and Health Administration
PEL	= Permissible Exposure Limit
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	= Canadian Transportation of Dangerous Goods
TDL0	= 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	= Workplace Hazardous Materials Information System