

Material Data Safety Sheet (MSDS)

Ambient Bamboo Floors

Ambient Bamboo Floors
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Additional Information:
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This MSDS solely applies to Ambient Bamboo Flooring products

1. PRODUCT IDENTIFICATION

Product

Manufacturing Headquarters

Prefinished Ambient Strand Woven Bamboo Natural, Carbonized

Synonyms: Bamboo flooring

2. HAZARDOUS INGREDIENTS

Name	CAS#	Percent	Regulatory Agency	Exposure Limits	Comments
Bamboo	N/A	94-95%	OSHA OSHA ACGIH ACGIH	PEL-TWA 15 mg/m3 PEL-TWA 5 mg/m3 TLV-TWA 3 mg/m3 TLV-STEL 10 mg/m3	Total dust Respirable dust fraction Respirable dust fraction Inhalable particles
Phenol formaldehyde resin solids	N/A	04-05%	OSHA OSHA ACGIH	PEL-TWA 0.75 ppm PEL-STEL 2 ppm TLV- Ceiling 0.3 ppm	Free gaseous formaldehyde Free gaseous formaldehyde Free gaseous formaldehyde
UV Finish Polymerized polyurethane	N/A	0-01%	OSHA ACGIH	PEL-TWA None TLV-TWA None	None None

3. HAZARD IDENTIFICATION

Appearance and Odor: A natural or toasted honey (carbonized) bamboo fiber with no, to a slight odor.

Primary Health Hazards: The extent to which health hazards are of primary concern for this product is the exposure to dust particles generated during machining, sanding, cutting, sawing, planing or routing.

Primary Route(s) of Exposure:

- (X) Eyes: Dust
- () Ingestion: N/A
- (X) Inhalation: Dust
- (X) Skin: Dust

Medical Conditions Generally Aggravated by Exposure: Dust particles can trigger respiratory conditions or pre-existing allergies.

Chronic Health Hazards: No tests have shown any correlating long term effects of bamboo dust and respiratory conditions, or cancer.

Carcinogenicity:

- () NTP: Formaldehyde, Group N/A
- () IARC Monographs: Formaldehyde, Group N/A
- () OSHA Regulated: Formaldehyde N/A

4. EMERGENCY AND FIRST-AID PROCEDURES

Ingestion: N/A

Eye Contact: Dust in eye may cause redness or watering, but should be treated as a foreign object. Flush with water several times. If irritation persists, you should seek medical attention.

Skin Absorption: Has not been known to occur under normal use

Inhalation: Out-of-the-box, or in whole form, this is N/A. Bamboo dust can cause sensitive individuals to experience respiratory difficulties, nasal irritation, cough or sneezing. Leave area and go to fresh air. Seek medical attention if respiratory difficulties or cough become severe, or nasal irritation persists.

5. FIRE AND EXPLOSION

Flash Point Method: N/A

Flammable Limits:

LEL: N/A

UEL: N/A

Extinguishing Media: Carbon Dioxide, Dry Chemical or Sand. Water

Auto ignition Temperature: Variable (400-500 F)

Special Firefighting Procedures: None.

Unusual Fire/Explosion Hazards: None.

6. ACCIDENTIAL RELEASE MEASURES

Out-of-the-box, this procedure is N/A. However, dust generated from cutting, drilling, planing, routing or sanding and related machining may be shoveled or vacuumed and properly disposed of. A NOISH-approved dust respirator and goggles should be worn if dust exposure limits are exceeded.

7. HANDLING AND STORAGE

Precautions to be Taken In Handling and Storage: Out-of-the-box there is no special handling required for this product. These products may release very small quantities of formaldehyde in gaseous form. Under foreseeable conditions of use, these products release less than 0.010 ppm in standard large chamber test conditions. This product should be kept in cool, dry environment and not exposed to high heat or flame. Store in well-ventilated area.

8. EXPOSURE CONTROL MEASURES

Personal Protective Equipment:

RESPIRATORY PROTECTION: Not required when taken out-of-the-box, however a NOISH-approved dust respirator is recommended for high dust producing activities such as cutting, drilling, planing or routing.

PROTECTIVE GLOVES: Not required when taken out-of-the-box, however some sort of work glove is recommended to avoid splinters or silvers after machining and handling the product.

EYE PROTECTION: Not required, but strongly recommended when machining or milling any material.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Are not required, but long sleeves and/or pants might be desirable.

WORK/HYGIENE PRACTICES: It is recommended to clean up dusty areas to avoid excess accumulation. Minimize practices that generate high air-borne dust particles.

Ventilation:

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

MECHANICAL: Good ventilation in processing and storage areas should be provided so that exposure limits are met.

9. PHYSICAL/CHEMICAL PROPERTIES

Boiling Point:	N/A
Vapor Pressure:	N/A
Vapor Density:	N/A
Specific Gravity:	1.03 g/ml
Melting Point:	N/A
Evaporation Rate:	N/A
Solubility in Water:	<0.1
% Volatile by Vol:	0
Percent Moisture:	6%-9%

10. STABILITY AND REACTIVITY

Stability:

() Unstable

(X) Stable

Conditions to Avoid: Excessive moisture, condensation or water vapor as this may cause warping or popping of the boards. Open flame or conditions above 400 F may cause the product to ignite.

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

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

Hazardous Polymerization: Will not occur.

Sensitivity to Mechanical Impact: N/A

Sensitivity to Static Discharge: N/A

11. TOXICOLOGICAL INFORMATION

The product, in the finished form, has no reportable toxicological information.

Formaldehyde OSHA Hazard rating = 3 for local and systemic acute and chronic exposures; highly toxic. Irritation studies: human skin, 150 ug/3 days, intermittent exposure produced mild results; human eye, 1 ppm/6 minutes, produced mild results. Toxicity studies: human inhalation TCLO of 8 ppm reported but response not specified; human inhalation TCLO of 17/mg/m3 for 30 minutes produced eye and pulmonary results; human inhalation TCLO of 300ug/m3 produced nose and CNS results; LC50 (rat, inhalation) = 1,000 mg/m3/30 minutes; LC50 (mice, inhalation) = 400mg/m3/2 hours.

Sources: Lewis, R.J., Sr. *1992 Sax's Dangerous Properties of Industrial Materials*, Eighth Edition, Van Nostrand Reinhold, NY.; *NIOSH Registry of Toxic Effects of Chemical Substances (RTECS)*, 1983-1984 Cumulative Supplement to 1981-1982 Edition and May 1995; *OSHA Regulated Hazardous Substances*, Government Institutes, Inc., February 1990.

12. ECOLOGICAL INFORMATION

Ambient Bamboo (Moso species) is a rapidly renewable product, and can contribute up to two LEED credits. This product does not contribute to the diminishment of natural wood forests.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method: In out-of-the-box product form, incineration is the preferred disposal method. However, if you choose Land disposal, refer to the RCRA criteria and local requirements, and determine if the material is considered hazardous waste. Take the appropriate steps according to the information acquired above.

14. TRANSPORT INFORMATION

Not regulated as a hazardous material by U.S. Department of Transportation. Not listed as hazardous material in Canadian Transportation of Hazardous Goods regulations.

15. REGULATORY INFORMATION

TSCA: All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.

Chemicals listed: Formaldehyde CAS# 50-00-0

DSL: All ingredients are listed or are not required to be listed under the Canadian Domestic Substance List.

Chemicals listed: Formaldehyde CAS# 50-00-0

WHMIS Classification

Not a controlled product

State Right to Know:

· California Prop 65 – This product contains formaldehyde which may be emitted from product. Formaldehyde is a compound that is known in the State of California to cause cancer. Ambient has emission-tested its products for formaldehyde, and finds the emissions

rate to be well below a significant risk level that would require product warnings.

· Pennsylvania – This product contains formaldehyde which depending on humidity and temperature may be emitted from product.

SARA Section 313 Information:

This product contains formaldehyde at a concentration that lists it with the chemical to SARA Title III, Section 313 supplier notification requirements. This product falls considerably below the Threshold Planning Requirement for Formaldehyde of 500 lbs.

SARA Section 311/312 Hazard Category

Under the above referenced category, and reviewed against definitions, the product meets:

- An immediate (acute) health hazard: Yes – dust only
- A delayed (chronic) health hazard: No
- A fire hazard: No
- A reactivity hazard: No
- A sudden release hazard: No

16. ADDITIONAL INFORMATION

Prepared by: Ambient Bamboo Floors. Date Revised: 01/01/09

USER RESPONSIBILITY: The information contained in this MSDS comes from sources believed to be accurate or otherwise technically correct, and information from occupational health and safety professionals, and regulatory agencies. It is the user's responsibility to determine if this information is suitable for their applications, and to follow safety precautions as necessary. The user has the responsibility to make sure that this sheet is the most up-to-date initial or revision issue.

ACGIH- American Conference of Government Industrial Hygienists Ceiling limit
CAS# - Chemical Abstracts Numbering System
DSL- Canadian Domestic Substance List
EPA- U.S. Environmental Protection Agency
IARC- International Agency for Research on Cancer

LCLo-	Lowest concentration in air resulting in death
LC50-	Administered dose resulting in death to 50% of experimental animals
LDLo-	Lowest dose resulting in death
MSHA-	Mining Safety and Health Administration
ND-	Not determined
N/A-	Not applicable
NAV-	Not available
NIOSH-	National Institute for Occupational Safety and Health
NTP-	National Toxicology Program
OSHA-	Occupational Safety and Health Administration
PEL-	Permissible Exposure Level
PPM-	Parts of gas or vapor per million parts of air
RCRA-	Resource Conservation and Recovery Act
SARA-	Superfund Amendments and Reauthorization Act
STEL-	Short-Term Exposure Limit (15 minutes)
TDG-	Canadian Transportation of Dangerous Goods
TCLo-	Lowest concentration in air resulting in a toxic effect
TDLo-	Lowest dose resulting in a toxic effect
TLV-	Threshold Limit Value
TSCA-	Toxic Substance Control Act
TWA-	Time-Weighted Average (8 hours)
WHMIS-	Workplace Hazardous Materials Information System