SAFETY DATA SHEET

Engineered Strand Bamboo Flooring

This Safety Data Sheet (SDS) Applies to Engineered Strand Bamboo Flooring.

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1. Identification

Manufacturer: Wellmade Floors – US Headquarters

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Wilsonville, OR 97070

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For further information: email: tech@wellmadefloors.com

Description: Prefinished engineered strand flooring, natural, carbonized, stained, & tiger strand woven

bamboo flooring

Brand Name: Wellmade Performance Floors

Other Names: Various & Private Label

UN No. N/A

Dangerous Goods Class: N/A

Product Use: Building Materials – Residential or Commercial

Appearance & Odor: Product may be composed of natural (blonde), carbonized (brown), mixture of both, or stained having a slight aromatic odor.

2. Hazards Identification

Appearance & Color: A natural, carbonized, stained, or mixture of bamboo fiber with no or slight odor.

Primary Health Hazards: The primary health hazards posed by this product are thought to be due to exposure to dust generated when sawing, sanding, planning, and/or routing. A NIOSH approved dust respirator should be worn if dust exposure limits are exceeded. May cause eye and skin irritation.

Primary Route(s) of Exposure:

() Ingestion: N/A (X) Skin: Dust

(X) Inhalation: Dust or Gas

Medical Conditions Generally Aggravated by Exposure: Dust may aggravate pre-existing respiratory or allergy conditions.

Chronic Health Hazards: Bamboo dust has not been associated with any long-term chronic respiratory conditions.

2. Hazards Identification Continued

Carcinogenicity Listing (bamboo dust)

() NTP: Not Listed () IARC: Not Listed () OSHA: Not Listed

Carcinogenicity Listing (wood dust)

(X) NTP: Known to be a human carcinogen

(X) IARC: Group 1 (X) OSHA: Not Listed

Carcinogenicity Listing (formaldehyde)

(X) NTP Formaldehyde Group 1 (X) IARC Monographs: Formaldehyde Group 1

3. Composition/Information on Ingredients

<u>Name</u>	CAS No.	Percent	<u>Agency</u>	Exposure Limits	<u>Comments</u>
Bamboo ¹	N/A	25 -30%	OSHA OSHA ACGIH ACGIH	PEL-TWA 15 mg/m ³ PEL-TWA 5 mg/m ³ TLV-TWA 3 mg/m ³ TLV-STEL 10 mg/m ³	Total dust Respirable dust fraction Respirable dust fraction Inhalable particles
Soft wood	None		OSHA OSHA ACGIH ACGIH	PEL - TWA 5 mg/m³ PEL - STEL 10 mg/m³ TLV - TWA 5 mg/m³ TLV - STEL 10 mg/m³	Total dust Respirable dust fraction Respirable dust fraction Inhalable particles
Phenol/urea- formaldehyde resin solids ²	50-00-0	4 – 5	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 cured finish ³ Polymerized polyurethane	N/A	0 – 1	OSHA ACGIH	PEL-TWA None TLV-TWA None	None None

^{1.} Bamboo is a member of the grass family which has distinct anatomical differences from wood. Therefore bamboo would be regulated as an organic dust in a category otherwise known as (PNOR) "Particulates Not Otherwise Regulated, or Nuisance Dust by OSHA. The ACGIH classifies dust or particulates in this category as "Particulates Not Otherwise Specified".

(X) OSHA Regulated: Formaldehyde

^{2.} Contains 0.1-1.0% by weight as free formaldehyde

^{3.} For Prefinished flooring

4. First Aid Measures

Ingestion: Not applicable.

Eye Contact: Dust in the eye should be treated as a foreign object, and should be flushed with water several times. If irritation persists, seek medical attention.

Skin Contact: Although not typical, contact dermatitis in sensitive persons may occur. Frequent contact can cause skin irritation, dryness, abrasions, cuts, or slivers. Wash hands or skin after contact. Seek medical attention if necessary.

Skin Absorption: Not applicable

Inhalation: Not applicable after installation. Bamboo and wood dust may cause obstruction in the nasal passages causing irritation, coughing, and/or sneezing. Remove from area to fresh air. Seek medical attention if respiratory conditions, cough, or breathing become severe or persists.

5. Fire Fighting Measures

Flash Point (Method Used): N/A

Flammable Limits: N/A

Extinguishing Media: Water, sand, dry chemical, or carbon dioxide

Special Firefighting Procedures: None

Unusual Fire/Explosion Hazards: None

Not applicable in purchased form. Dust generated from sawing, sanding, planning, or routing may be vacuumed or shoveled for recovery, removal, or disposal. A NIOSH approved dust respirator should be worn if dust exposure limits are exceeded.

6. Accidental Release Measures

Ventilation:

Local Exhaust: Provide local exhaust as needed to avoid exposure limits.

Mechanical: Ventilation in processing and storage areas should be provided to avoid exposure limits.

Special: None

Other: None

7. Handling and Storage

Precautions to be taken in handling and storage: No special precautions are needed in purchased form. Keep in a cool, dry environment away from open flame. Store in a well-ventilated area.

8. Exposure Controls/Personal Measures

Personal Protective Equipment:

<u>Respiratory Equipment:</u> Not required; however a NOISH approved respirator is recommended when allowable exposure limits are exceeded.

Protective Gloves: Not required; however, work gloves are recommended to avoid splinters, slivers, and cuts.

<u>Eye Protection:</u> Not required; however, protective goggles/glasses are highly recommended when sawing, planing, or routing.

Other Protective Clothing or Equipment: Not required; however, outer garments may be desirable due to dust.

<u>Work/Hygiene Practices:</u> Clean up settled dust to avoid slippery areas and accumulation of combustible materials. Avoid or minimize practices that generate high air-borne dust particles.

9. Physical/Chemical Properties

N/A Boiling Point (@ 760-mm Hg): Vapor Pressure (mm Hg): N/A Vapor Density: N/A Specific Gravity ($H_2O = 1$): 0.58 g/ml **Melting Point:** N/A **Evaporation Rate (Butyl Acetate = 1):** N/A Solubility in Water (% by weight): < 0.1% %Volatile by Volume [@ 70°F (21° C)]: N/A N/A pH: **Percent Moisture:** 8% ± 2%

10. Stability and Reactivity

Stability:

Conditions to Avoid:	Avoid open flame. Product may ignite at temperatures in excess of 400°
	F (204° C) Avoid excessive moisture

(X) Stable

() Unstable

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

Hazardous Decomposition or By-products: Thermal decomposition products include: carbon monoxide, carbon

dioxide, aliphatic aldehydes, organic acids, terpenes, and polycyclic

aromatic hydrocarbons.

Hazardous Polymerization: N/A

Sensitivity to Mechanical Impact: N/A

Sensitivity to Static Discharge: N/A

11. Toxicological Information

None available in purchased form.

Formaldehyde is listed by IARC as a human carcinogen. NTP includes formaldehyde in the Annual Report on Carcinogens. Formaldehyde is regulated by OSHA as a potential cancer agent. Some rats exposed under laboratory conditions to 14 ppm formaldehyde (a level far exceeding human tolerance limits, and far exceeding that normally found in the workplace) for two years developed a nasal cancer. The Universities Associated for Research and Education in Pathology (UAREP) has stated in a report, Epidemiology of a Chronic Occupational Exposure to Formaldehyde, (December, 1987,) that: "1: For no malignancy in man is there convincing evidence of a relationship with formaldehyde exposure; and 2: Furthermore, that if a relationship does exist, the excess risk, in absolute terms, must be small."

12. Ecological Information

No information available at this time. Bamboo is a rapidly renewable natural resource, and is not known to have an adverse ecological impact at this time.

13. Disposal Considerations

Waste disposal Method: If disposal of, or discarded in its purchased form, incineration is preferable. Land disposal is acceptable in most states. However, it is the user's responsibility to determine at the time of disposal whether this product meets RCRA criteria for hazardous waste. Follow applicable federal, state, and local regulations.

14. Transport Information

Not regulated as a hazardous material by the U.S. Department of Transportation. Not listed as a hazardous material in TDG regulations (Canadian Transportation of Dangerous Goods).

15. Regulatory Information

TSCA: All ingredients are listed on the TSCA inventory, or they 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

OSHA: Wood products per se are not hazardous under the criteria of the federal OSHA Hazard Communication Standard 29CFR 1910.1200. However, wood dust generated by sawing, sanding or machining wood products may be hazardous and hence included under 1910.1200.

IARC Monograph: All ingredients are listed or are not required to be listed. Chemicals Listed: Formaldehyde CAS # 50.00.0

WHMIS Classification: Controlled Product: D2A (wood dust: IARC Group 1)

15. Regulatory Information Continued

State Right To Know:

California Proposition 65 – This product contains formaldehyde which depending on temperature and humidity may be emitted from the product. Formaldehyde is a compound that is known in the State of California to cause cancer. Wellmade has evaluated formaldehyde emission rates from its products (typical range: 0 - .01 ppm) and has found these rates to be below the no significant risk level that would require product warnings.

California Proposition 65 Warning – Wood Dust: Drilling, sawing, sanding or machining wood products generates wood dust, a substance known to the State of California to cause cancer. Avoid inhaling wood dust or otherwise determine what safeguards or personal protection equipment may be necessary to prevent inhaling wood dust.

New Jersey: When cut or otherwise machined, wood products may emit wood dust. Wood dust appears on New Jersey's Environmental Hazardous Substance List.

Pennsylvania: - This product contains formaldehyde which depending on temperature and humidity may be emitted from the product. When cut or otherwise machined, wood products may emit wood dust. Wood dust appears on Pennsylvania's Appendix A, Hazardous Substance List.

SARA 313 Information: This product contains formaldehyde which depending on temperature and humidity may be emitted from the product. Formaldehyde is a compound that is known in the State of California to cause cancer. Wellmade has evaluated formaldehyde emission rates from its products, and finds the emission rates to be below a significant risk level that would require product warnings.

SARA 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 – Yes – Dust only A fire hazard – No A reactivity hazard – No A sudden release hazard – No

16. Other Information

Date Prepared: 12/4/14 Prepared By: Don Zimmerman

User's Responsibility: The information contained in this SDS comes from sources believed to be accurate or otherwise technically correct, and from occupational health and safety professionals, and/or regulatory agencies. It is the responsibility of the user to determine if this information is suitable for their applications, and to follow safety precautions if necessary. The user is responsible to be sure this is the most up-to-date issue.

Definitions of Common Terms:

ACGIH American Conference of Governmental Industrial Hygienists

CAS No. Chemical Abstracts System Number

Ceiling Limit

16. Other Information Continued

IARC International Agency for Research on Cancer

N/A Not applicable

NIOSH National Institute for Occupational Safety and Health

NTP National Toxicology Program

OSHA Occupational Safety and Health Administration

PEL Permissible Exposure Limit

ppm Parts Per Million

RCRA Resource Conservation and Recovery Act

SARA Superfund Amendments and Reauthorization Act

STEL Short Term Exposure Limits (15 minutes)
TDG Canadian Transportation of Dangerous Goods

TLV Threshold Limit Value
TSCA Toxic Substance Control Act
TWA Time Weighted Average

UV Ultraviolet

WHMIS Workplace Hazardous Materials Information System

 ${\sf SDS-Engineered\ Strand\ Bamboo\ Flooring}$

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