



Material Data Safety Sheet (MSDS) Bamboo Plywood

This MSDS applies to Smith & Fong Plyboo - CARB ph II - bamboo architectural plywood products, excluding PlybooPure® soybase adhesive - no added formaldehyde bamboo plywood.
ANSI Format

1. PRODUCT IDENTIFICATION

Product(s) Manufacturing Location
 Unfinished edge grain and flat grain bamboo panels Company headquarters, San Francisco, CA, USA

Synonyms: Bamboo paneling, bamboo architectural plywood, cabinetry and furniture system

Product Composition: Timber bamboo (Moso) kiln dried and laminated to produce a single or multi-ply plywood.

Manufacturer's Information:

Manufacturer Name: Smith & Fong Company, Inc.
 Manufacturer Address: 475 Sixth Street
 San Francisco, CA 94103 USA

Emergency Phone: (415) 896-0577
 Additional Phone: (866) 835-9859
 Website: www.plyboo.com
 Email: sales@plyboo.com

2. HAZARDOUS INGREDIENTS

Name	CAS#	Percent	Regulatory Agency	Exposure Limits	Comments
Bamboo	N/A	97-99	OSHA	PEL-TWA 15 mg/m3	Total dust
			OSHA	PEL-TWA 5 mg/m3	Respiratory dust fraction
			ACGIH	TLV-TWA 3 mg/m3	Respiratory dust fraction
			ACGIH	TLV-TWA 10 mg/m3	Inhalable particles
Formaldehyde resin solids ¹ (bamboo)	9011-05-6	1-3	OSHA	PEL-TWA 0.75 ppm	Free gaseous
			OSHA	PEL-STEL 2 ppm	Free gaseous
			ACGIH	TLV-Ceiling 0.3 ppm	Free gaseous

3. HAZARD IDENTIFICATION

Appearance and Odor: A natural or amber bamboo fiber with no, to a slight odor.

Primary Health Hazards: The health hazards of primary concern are exposure to dust particulate generated during machining, cutting, sanding, etc.

Primary Route(s) of Exposure: (X) Dust; (X) Inhalation: Dust or gas.

Medical Conditions Generally Aggravated by Exposure: Respiratory conditions or allergies.

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

Carcinogenicity:

- (X) NTP: Formaldehyde, Group 1
- (X) IARC Monographs: Formaldehyde, Group 1
- (X) OSHA Regulated: Formaldehyde

4. EMERGENCY AND FIRST-AID PROCEDURES

Ingestion: Not applicable.

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

urea formaldehyde emissions test 0.02ppm¹

Skin Contact: Although not typical, contact dermatitis in sensitive individuals can occur. Frequent handling of product can cause skin dryness, slight abrasion, cuts or slivers. Hands should be washed after handling. Seek medical attention if needed.

Skin Absorption: Under normal use, does not occur.

Inhalation: Highly sensitive individuals may experience respiratory difficulties. Bamboo dust can cause 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: N/A

Extinguishing Media: Water, water fog, carbon dioxide, sand or dry chemical.

Autoignition Temperature: Variable (400-500 F)

Special Firefighting: None.

Unusual Fire/Explosion Hazards: None.

6. ACCIDENTAL RELEASE MEASURES

Dust generated from cutting, sanding and related machining may be shoveled or vacuumed and properly disposed of. A NOISH-approved dust respirator should be worn if dust exposure limits are exceeded.

7. HANDLING AND STORAGE

Precautions to be Taken in Handling and Storage: No special handling required in product purchase form. 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, however a NOISH-approved dust respirator is recommended for high dust producing activities.

PROTECTIVE GLOVES: Not required, however work gloves are recommended to avoid sliver and splinters from machining or handling product.

EYE PROTECTION: Not required, however eye protection when machining or milling any material is highly recommended.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Not required.

WORK/HYGIENE PRACTICES: 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.

MECHANICAL: Good ventilation in processing and storage areas should be provided.

9. PHYSICAL/CHEMICAL PROPERTIES

Boiling Point:	N/A
Vapor Pressure:	N/A
Vapor Density:	N/A
Specific Gravity:	0.63
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: (X) Stable

Conditions to Avoid: Excessive moisture, condensation or water vapor. Open flame or conditions above 400 F.

Incompatibility (Materials to Avoid): 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

This product, in purchased form, has no toxicological information.

OSHA Formaldehyde Hazard rating. = 0.75 ppm for local and systemic acute and chronic exposures; highly toxic. Reference OSHA Regulated Hazardous Substances, Government Institutes, Inc., February 1990.
IARC Formaldehyde Monograph, Vol. 88, 2005. = Group 1.

12. ECOLOGICAL INFORMATION

Bamboo (Moso species) is a rapidly renewable product, and does not contribute to the diminishment of natural wood supplies.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method: In purchased product form, incineration is the preferred disposal method. Land disposal should be guided by RCRA criteria and local requirements, and determination made if considered hazardous waste.

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

Chemicals listed:

IARC Monograph, Formaldehyde CAS # 50-00-0
Canadian Domestic Substance List, Formaldehyde CAS #50-00-0

Not a controlled Workplace Hazardous Material Systems 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. Smith & Fong Company has emission-tested its products for formaldehyde, and finds the emissions rates 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. However, the emissions characteristics and concentrations have been measured using ASTM E-1333 test methods, The product emission rate falls well below (0.01 ppm equates to a yearly emission rate of <0.01 lbs/yr). This emission rate 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: Smith & Fong Company, Inc.
Date Prepared: 07/01/01
Date Revised: 09/23/11

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.

Glossary of Acronyms and Terms

ACGIH	American Conference of Government Industrial Hygienists
C	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